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The Code of Federal Regulations is sold by the Superintendent of Documents. Prices of new books are listed in the first FEDERAL REGISTER issue of each week.

NUCLEAR REGULATORY COMMISSION

10 CFR Part 72

[NRC–2009–0349]

RIN 3150–AI71

List of Approved Spent Fuel Storage Casks: HI–STORM 100 Revision 7, Confirmation of Effective Date

AGENCY: Nuclear Regulatory Commission.

ACTION: Direct final rule; confirmation of effective date.

SUMMARY: The Nuclear Regulatory Commission (NRC) is confirming the effective date of December 28, 2009, for the direct final rule that was published in the **Federal Register** on October 13, 2009. The direct final rule amended the NRC's spent fuel storage regulations in 10 CFR 72.214 to revise the HI–STORM 100 dry cask storage system listing to include Amendment No. 7 to Certificate of Compliance (CoC) Number 1014.

DATES: *Effective Date:* The effective date of December 28, 2009, is confirmed for the direct final rule published October 13, 2009 (74 FR 52387).

ADDRESSES: Documents related to this rulemaking, including any comments received, may be examined at the NRC Public Document Room, Room O–1F23, 11555 Rockville Pike, Rockville, MD 20852.

FOR FURTHER INFORMATION CONTACT: Neelam Bhalla, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, telephone (301) 415–6843, e-mail *Neelam.Bhalla@nrc.gov*.

SUPPLEMENTARY INFORMATION: On October 13, 2009 (74 FR 52387), the NRC published a direct final rule amending its regulations at 10 CFR 72.214 to include Amendment No. 7 to CoC Number 1014. Amendment No. 7 modifies the CoC to add the HI–STORM 100U system to the HI–STORM 100 cask systems. The HI–STORM 100U system allows for the underground storage of dry spent nuclear fuel (SNF) by utilizing an underground vertical ventilated module (VVM) that can accept certain Holtec multipurpose canisters previously certified for storage of SNF in the aboveground HI–STORM system. The amendment also incorporates a mandatory radiation protection perimeter around the loaded VVMs. In addition, the amendment will reinstate the decay heat limits for damaged fuel and fuel debris in Appendix B, Technical Specification (TS) 2.4, for the aboveground system that had been inadvertently deleted from Amendment Nos. 5 and 6; incorporate separate TS Appendices A and B for the HI–STORM aboveground system, and TS Appendices A–100U and B–100U, for the HI–STORM 100U underground system; revise Appendix B, TS 3.4.5, to be consistent with the required system thermal boundary conditions, as submitted in the applicant's safety analysis report for a fire accident condition, and with Holtec's original (i.e., initial certificate application or Amendment 0) submittal and the NRC's original safety evaluation report; revise and add certain definitions in Appendix A, TS 1.1, to include the VVM; and incorporate minor editorial corrections in the TS for the aboveground system. In the direct final rule, NRC stated that if no significant adverse comments were received, the direct final rule would become final on December 28, 2009. The NRC did not receive any comments on the direct final rule. Therefore, this rule will become effective as scheduled.

Dated at Rockville, Maryland, this 7th day of December 2009.

For the Nuclear Regulatory Commission.

Cindy Bladey,

Acting Branch Chief, Rulemaking and Directives Branch, Division of Administrative Services, Office of Administration.

[FR Doc. E9–29554 Filed 12–10–09; 8:45 am]

BILLING CODE 7590–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2009–1089; Directorate Identifier 2009–SW–16–AD; Amendment 39–16101; AD 2009–09–51]

RIN 2120–AA64

Airworthiness Directives; Eurocopter France Model EC225LP Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This document publishes in the **Federal Register** an amendment adopting Airworthiness Directive (AD) 2009–09–51, which was sent previously to all known U.S. owners and operators of Eurocopter France (Eurocopter) Model EC225LP helicopters by individual letters. This AD requires, before further flight, determining if the ''CHIP'' detector light on the instrument panel (Vehicle Monitoring System Screen) previously illuminated. If the ''CHIP'' detector light did illuminate and it illuminated because of a metal particle on the magnetic plug of the epicyclic reduction gear module (module) of the main gearbox (MGB), or if you cannot determine from the maintenance records which chip detector caused the ''CHIP'' detector light to illuminate or whether the detector light stayed illuminated after the ''CHIP'' detector switch was turned to the ''CHIP PULSE'' setting, replacing the module with an airworthy module is required before further flight. Also required before further flight is inspecting the MGB module magnetic chip detector electrical circuit and determining whether the system is functioning properly, including whether the ''CHIP'' detector light annunciates on the instrument panel (Vehicle Monitoring System Screen). Finally, this AD requires replacing the module with an airworthy module if the ''CHIP'' detector light illuminates, stays illuminated after the ''CHIP'' detector switch is turned to the ''CHIP PULSE'' setting, and you determine that a metal particle on the module magnetic plug caused that illumination. This amendment is prompted by a mandatory continuing airworthiness information

(MCAI) AD issued by the European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community. EASA notified us of an accident that occurred April 1, 2009 on a Eurocopter Model AS332L2 helicopter and EASA advises that the ''cause of the accident seems to be connected with degradation of the epicyclic module of the MGB, the root cause of which is still to be determined.'' The actions specified by this AD are intended to prevent failure of the MGB and subsequent loss of control of the helicopter.

DATES: Effective December 28, 2009, to all persons except those persons to whom it was made immediately effective by Emergency AD 2009–09–51, issued on April 17, 2009, which contained the requirements of this amendment.

Comments for inclusion in the Rules Docket must be received on or before February 9, 2010.

ADDRESSES: Use one of the following addresses to submit comments on this AD:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* 202–493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

You may get the service information identified in this AD from American Eurocopter Corporation, 2701 Forum Drive, Grand Prairie, TX 75053–4005, telephone (972) 641–3460, fax (972) 641–3527, or at *http://www.eurocopter.com.*

Examining the Docket: You may examine the docket that contains the AD, any comments, and other information on the Internet at *http://www.regulations.gov,* or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Operations office (telephone (800) 647–5527) is located in Room W12–140 on the ground floor of the West Building at the street address stated in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Gary Roach, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Regulations and Policy Group, Fort Worth, Texas 76137–0111, telephone (817) 222–5130, fax (817) 222–5961.

SUPPLEMENTARY INFORMATION: On April 17, 2009, we issued Emergency AD 2009–09–51 for the Eurocopter Model EC225LP helicopters, which requires, before further flight, determining if the ''CHIP'' detector light on the instrument panel (Vehicle Monitoring System Screen) previously illuminated. If the ''CHIP'' detector light did illuminate and it illuminated because of a metal particle on the magnetic plug of the MGB module, or if you cannot determine from the maintenance records which chip detector caused the ''CHIP'' detector light to illuminate or whether the detector light stayed illuminated after the ''CHIP'' detector switch was turned to the ''CHIP PULSE'' setting, replacing the module with an airworthy module is required before further flight. The Emergency AD also requires inspecting the MGB module magnetic chip detector electrical circuit and determining whether the system is functioning properly, including whether the ''CHIP'' detector light annunciates on the instrument panel (Vehicle Monitoring System Screen). Finally, the Emergency AD requires replacing the module with an airworthy module if the ''CHIP'' detector light illuminates, stays illuminated after the ''CHIP'' detector switch is turned to the ''CHIP PULSE'' setting, and you determine that a metal particle on the module magnetic plug caused that illumination. That action was prompted when EASA, which is the Technical Agent for the Member States of the European Community, notified us of an accident that occurred April 1, 2009 on a Eurocopter Model AS332L2 helicopter. Although the cause of the accident is still under investigation, EASA advises that the ''cause of the accident seems to be connected with degradation of the epicyclic module of the MGB, the root cause of which is still to be determined.'' EASA further advises that ''In the light of this information, the detection of any contamination of the MGB is of utmost importance as a precautionary measure.'' EASA issued Emergency AD No. 2009–0087–E, dated April 11, 2009, to correct an unsafe condition for the Eurocopter Model AS332L2 and EC225LP helicopters.

EASA Emergency AD No. 2009–0087–E applies to both the Model AS332L2 helicopters and the Model EC225LP helicopters because both helicopter models use a similar module. However, our AD 2009–09–51 applies only to the Model EC225LP helicopters because there are currently no Model AS332L2 helicopters on the U.S. registry. Also, AD 2009–09–51 differs from the EASA AD in that the EASA AD specifies that the module be disassembled, inspected, and then reinstalled when particles are detected on the magnetic plug of the module, allowing flight operations until another particle is detected. Our AD requires the following before further flight:

- Determining if, within the last 200 hours time-in-service (TIS), the ''CHIP'' detector light illuminated because of a metal particle on the magnetic plug of the module, part number 332A32–5021–01M, and if so, whether the ''CHIP'' detector light stayed illuminated after the chip detector switch was turned to the ''CHIP PULSE'' setting to activate the ''fuzz burn-off'' feature. If the ''CHIP'' detector light illuminated because of a metal particle on the magnetic plug of the module, and the ''CHIP'' detector light stayed illuminated after the chip detector switch was turned to the ''CHIP PULSE'' setting, or if you cannot determine from the maintenance records which chip detector caused the ''CHIP'' detector light to illuminate or whether the detector light stayed illuminated after the ''CHIP'' detector switch was turned to the ''CHIP PULSE'' setting, replacing the module with an airworthy module is required before further flight.
- Inspecting the MGB module magnetic chip detector electrical circuit and determining whether the system is functioning properly, including whether the ''CHIP'' detector light annunciates on the instrument panel (Vehicle Monitoring System Screen). Thereafter, the AD requires replacing the module with an airworthy module if the ''CHIP'' detector light illuminates, stays illuminated after the ''CHIP'' detector switch is turned to the ''CHIP PULSE'' setting, and you determine that a metal particle on the module magnetic plug (rather than the main reduction gear (lower MGB), the flared housing (mast assembly), the intermediate gearbox (IGB), or the tail rotor gearbox (TGB)) caused the ''CHIP'' detector light to illuminate.

Eurocopter has issued Emergency Alert Service Bulletin No. 05A017 (ASB). The ASB is dated April 10, 2009 and describes procedures for inspecting both the magnetic plug on the MGB epicyclic reduction gear module and the chip collector, and instructions to replace the epicyclic reduction gear module if necessary. EASA classified this service bulletin as mandatory and issued EASA AD No. 2009–0087–E, dated April 11, 2009 to ensure the

continued airworthiness of these helicopters in France.

This helicopter model is approved by the aviation authority of France, and is approved for operation in the United States. Pursuant to our bilateral agreement with France, EASA has notified us of the unsafe condition described in the MCAI AD. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other Eurocopter Model EC225LP helicopters of the same type design.

Since the unsafe condition described is likely to exist or develop on other Eurocopter Model EC225LP helicopters of the same type design, the FAA issued Emergency AD 2009–09–51 to prevent failure of the MGB and subsequent loss of control of the helicopter. The AD requires the actions described previously. The short compliance time involved is required because the previously described critical unsafe condition can adversely affect the controllability of the helicopter. Therefore, this AD must be issued immediately.

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment thereon were impracticable and contrary to the public interest, and good cause existed to make the AD effective immediately by individual letters issued on April 17, 2009 to all known U.S. owners and operators of Eurocopter Model EC225LP helicopters. These conditions still exist, and the AD is hereby published in the **Federal Register** as an amendment to 14 CFR 39.13 to make it effective to all persons.

This AD is an interim action. We anticipate additional rulemaking once the cause of the accident is determined and the manufacturer develops a terminating action.

We estimate that this AD will affect 2 helicopters of U.S. registry. It will take approximately 10 minutes to inspect the module without removal and 10 work hours to remove and replace the module, if necessary. The average labor rate is $80 per work hour. Required parts will cost approximately $512,318 per helicopter. Based on these figures, we estimate the total cost impact of the AD on U.S. operators to be $513,145, assuming that the module on each helicopter is inspected once and one of the modules is replaced.

Comments Invited

This AD is a final rule that involves requirements that affect flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any written data, views, or arguments regarding this AD. Send your comments to an address listed under **ADDRESSES**. Include ''Docket No. FAA–2009–1089; Directorate Identifier 2009–SW–16–AD'' at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD. We will consider all comments received by the closing date and may amend the AD in light of those comments.

We will post all comments we receive, without change, to *http://www.regulations.gov,* including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of our docket Web site, you can find and read the comments to any of our dockets, including the name of the individual who sent the comment. You may review the DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477–78).

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the regulation:

1. Is not a ''significant regulatory action'' under Executive Order 12866;

2. Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD. See the AD docket to examine the economic evaluation.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, ''General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

■ Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

2009–09–51 Eurocopter France: Amendment 39–16101. Docket No. FAA–2009–1089; Directorate Identifier 2009–SW–16–AD.

Applicability: Model EC225LP helicopters with an epicyclic reduction gear module (module), part number 332A32–5021–01M, installed, certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent failure of the main gearbox (MGB) and subsequent loss of control of the helicopter, accomplish the following:

(a) Before further flight:

(1) Determine from the maintenance records whether, within the last 200 hours time-in-service (TIS), the ''CHIP'' detector light illuminated because of a metal particle on the magnetic plug of the module, and if so, whether the ''CHIP'' detector light stayed illuminated after the chip detector switch was turned to the ''CHIP PULSE'' setting to activate the ''fuzz burn-off'' feature. If those records indicate that the ''CHIP'' detector light illuminated because of a metal particle on the magnetic plug of the module, and the ''CHIP'' detector light stayed illuminated after the chip detector switch was turned to the ''CHIP PULSE'' setting, replace the module with an airworthy module before further flight. If you cannot determine from the maintenance records which chip detector caused the ''CHIP'' detector light to illuminate or whether the detector light stayed illuminated after the ''CHIP'' detector switch was turned to the ''CHIP PULSE'' setting, replace the module with an airworthy

module before further flight. A module with a magnetic plug that attracted a metal particle which activated the ''CHIP'' detector light within the last 200 hours TIS and was not extinguished when the ''CHIP PULSE'' was activated is unairworthy.

(2) Inspect the MGB module magnetic chip detector electrical circuit and determine whether the system is functioning properly, including whether the ''CHIP'' detector light annunciates on the instrument panel (Vehicle Monitoring System Screen).

(b) Thereafter, if the ''CHIP'' detector light illuminates, stays illuminated after the ''CHIP'' detector switch is turned to the ''CHIP PULSE'' setting, and you determine that a metal particle on the module magnetic plug (rather than the main reduction gear (lower MGB), the flared housing (mast assembly), the intermediate gearbox (IGB), or the tail rotor gearbox (TGB)) caused the ''CHIP'' detector light to illuminate, replace the module with an airworthy module.

(c) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Contact the Manager, Safety Management Group, FAA, ATTN: Gary Roach, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Regulations and Policy Group, Fort Worth, Texas 76137–0111, telephone (817) 222–5130, fax (817) 222–5961, for information about previously approved alternative methods of compliance.

(d) Special flight permits will not be issued.

(e) Copies of the applicable service information may be obtained from American Eurocopter Corporation, 2701 Forum Drive, Grand Prairie, TX 75053–4005, telephone (972) 641–3460, fax (972) 641–3527, or at *http://www.eurocopter.com.*

(f) This amendment becomes effective on December 28, 2009, to all persons except those persons to whom it was made immediately effective by Emergency AD 2009–09–51, issued April 17, 2009, which contained the requirements of this amendment.

Note: The subject of this AD is addressed in European Aviation Safety Agency (EASA) AD No. 2009–0087–E, dated April 11, 2009.

Issued in Fort Worth, Texas, on October 23, 2009.

Mark R. Schilling,

Acting Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. E9–29425 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2009–1118; Directorate Identifier 2008–SW–60–AD; Amendment 39–16126; AD 2009–25–07]

RIN 2120–AA64

Airworthiness Directives; Eurocopter France Model EC120B Helicopters

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for the Eurocopter France (ECF) Model EC120B helicopters. This AD results from a mandatory continuing airworthiness information (MCAI) AD issued by the European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community. The MCAI AD states that operators have reported that latching push buttons on the Emergency Floatation Gear Lighting and Ancillary Control Unit (LACU) used to arm the emergency floatation gear are unreliable, and the 'FLOAT ARM' pushbutton does not latch in the depressed (LACU armed) position. These actions are intended to prohibit flight over water if a functional test indicates that the emergency floatation gear cannot be armed, which would preclude deployment of the floats in an emergency water ditching that could result in helicopter damage and a fatality.

DATES: This AD becomes effective on December 28, 2009.

We must receive comments on this AD by February 9, 2010.

ADDRESSES: You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the instructions for submitting your comments electronically.
- *Fax:* (202) 493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

You may get the service information identified in this AD from American Eurocopter Corporation, 2701 Forum Drive, Grand Prairie, TX 75053–4005, telephone (800) 232–0323, fax (972) 641–3710, or at *http://www.eurocopter.com.*

Examining the Docket: You may examine the AD docket on the Internet at *http://www.regulations.gov* or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647–5527) is stated in the **ADDRESSES** section of this AD. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: DOT/FAA Southwest Region, J. R. Holton, Jr., ASW–112, Aviation Safety Engineer, Rotorcraft Directorate, Safety Management Group, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222–4964, fax (817) 222–5961.

SUPPLEMENTARY INFORMATION:

Discussion

EASA, which is the Technical Agent for the Member States of the European Community, has issued EASA AD No. 2008–0177–E, dated September 19, 2008, to correct an unsafe condition for the ECF Model EC120B helicopters.

The MCAI AD states that operators have reported unreliability of the latching push buttons on the Emergency Floatation LACU including the 'FLOAT ARM' pushbutton used to arm the emergency floatation gear and failure of the light to illuminate properly. Investigations have revealed the anomaly may be due to the bonding of these pushbuttons. Design improvements for the pushbuttons are currently in progress. The MCAI AD states that a repetitive in-flight functional check of the 'FLOAT ARM' pushbutton before flying over water is necessary. If the pushbutton fails to latch in the depressed position, the MCAI AD prohibits further flight over water until the 'FLOAT ARM' pushbutton is replaced with an airworthy unit. These actions are intended to prohibit flight over water if a functional test indicates that the emergency floatation gear cannot be armed, which would preclude deployment of the floats in an emergency water ditching that could result in helicopter damage and a fatality.

You may obtain further information by examining the MCAI AD and any

related service information in the AD docket.

Related Service Information

ECF has issued Emergency Alert Service Bulletin No. 04A007, on September 18, 2008 (ASB). The ASB specifies a pre-flight check before each flight. The ASB also specifies arming the emergency floatation gear by pressing the ''FLOAT ARM'' pushbutton and reducing speed in accordance with the Rotorcraft Flight Manual Supplement (RFMS) 9.17 to determine if both lights remain lit. If both lights remain lit, the ASB specifies continuing the flight. If both lights do not remain lit, the ASB specifies that flying over water is prohibited and specifies replacing the pushbutton with an airworthy pushbutton before the next flight over water. The actions described in the MCAI AD are intended to correct the same unsafe condition as that identified in the ASB.

FAA's Evaluation and Unsafe Condition Determination

The ECF Model EC120B helicopter has been approved by the aviation authority of France and is approved for operation in the United States. Pursuant to our bilateral agreement with France, EASA, their technical agent, has notified us of the unsafe condition described in the MCAI AD. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other helicopters of the same type design.

Differences Between This AD and the MCAI AD

We require adding the limitations to the Limitations section of the RFMS not the basic Rotorcraft Flight Manual. We also allow inserting a copy of this AD in the RFMS or making pen and ink changes to the language in the RFMS. Also, we clarified the wording used to describe the functional check.

Costs of Compliance

We estimate that this AD will affect about 153 Model EC120B helicopters of U.S. registry. We also estimate that it will take about 1 work-hour per helicopter to replace the pushbutton. The cost of revising the limitations section of the RFMS and of the pre-flight functional check is negligible. The average labor rate is $80 per work-hour. Required parts will cost about $190 per pushbutton. Based on these figures, we estimate the cost of this AD on U.S. operators will be $41,310 per helicopter, assuming the pushbutton is replaced on each helicopter.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. We find that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because revising the RFMS is required before further flight and a pre-flight functional check before each flight over water. Therefore, we have determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. However, we invite you to send us any written data, views, or arguments concerning this AD. Send your comments to an address listed under the **ADDRESSES** section of this AD. Include ''Docket No. FAA–2009–1118; Directorate Identifier 2008–SW–60–AD'' at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to *http://www.regulations.gov* including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. ''Subtitle VII: Aviation Programs,'' describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in ''Subtitle VII, Part A, Subpart III, Section 44701: General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on product(s) identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

Therefore, I certify this AD:

1. Is not a ''significant regulatory action'' under Executive Order 12866;

2. Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

■ Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new AD:

2009–25–07 Eurocopter France: Amendment 39–16126. Docket No. FAA–2009–1118; Directorate Identifier 2008–SW–60–AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective on December 28, 2009.

Other Affected ADs

(b) None.

Applicability

(c) This AD applies to Model EC120B helicopters, with an Emergency Floatation Gear Lighting and Ancillary Control Unit ''LACU'', part number (P/N) 040101AB, installed, certificated in any category.

Reason

(d) The mandatory continuing airworthiness information (MCAI) AD states that operators have reported unreliability of the latching push buttons on the LACU including the 'FLOAT ARM' pushbutton used to arm the emergency floatation gear

and failure of the lights to illuminate properly. These actions are intended to prohibit flight over water if a functional test indicates that the emergency floatation gear cannot be armed, which would preclude deployment of the floats in an emergency water ditching that could result in helicopter damage or a fatality.

Actions and Compliance

(e) Required as indicated, unless already accomplished.

(1) Before further flight, amend the EC120B Rotorcraft Flight Manual Supplement (RFMS), Document #9–17 for the Emergency Floatation Gear Aerazur, by inserting a copy of this AD into the Limitations section of the RFMS or making pen and ink changes to that section as follows:

''Arm the emergency floatation gear by pressing the LACU 'FLOAT ARM' pushbutton.

—If both lights of the pushbutton remain lit, flight over water is permitted.

—If one or both lights of the pushbutton do not remain lit, FLIGHT OVER WATER IS PROHIBITED.''

(2) Before each flight over water, perform a functional check to determine whether flight over water is permitted under the Limitations section in paragraph (e)(1) of this AD. For purposes of this AD, ''flight over water'' means flight beyond the power-off gliding distance from shore. ''Shore'' is an area of land adjacent to the water and above the high water mark but does not include land area that is intermittently under water.

(3) If the LACU fails the functional check required by paragraph (e)(2) of this AD, place a placard over the ''FLOAT ARM'' pushbutton that reads ''INOP.''

(4) The functional check required by paragraph (e)(2) may be performed by an owner/operator (pilot) holding at least a private pilot certificate because no special tools are required. The check must be entered into the aircraft records showing compliance with paragraph (e)(2) of this AD in accordance with the requirements of 14 CFR sections 43.11 and 91.417(a)(2)(v).

Differences Between This AD and the MCAI AD

(f) We require adding the limitations to the Limitations section of the RFMS not the basic RFM. We also allow inserting a copy of this AD in the RFMS or making pen and ink changes to the language in the RFMS. We changed the wording used to describe the functional check.

Other Information

(g) Alternative Methods of Compliance (AMOCs): The Manager, Safety Management Group, ATTN: DOT/FAA Southwest Region, J. R. Holton, Jr., ASW–112, Aviation Safety Engineer, Rotorcraft Directorate, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222–4964, fax (817) 222–5961, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

(h) Special flight permits may be issued for a single flight in accordance with sections 14 CFR 21.197 and 21.199 to operate the helicopter to a location where the requirements of this AD can be accomplished provided there are no passengers on board and the helicopter is not flown over water.

Related Information

(i) The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, EASA AD No. 2008–0177–E, dated September 19, 2008, and Eurocopter France Emergency Alert Service Bulletin No. 04A007, dated September 18, 2008, contain related information.

Joint Aircraft System/Component (JASC) Tracking Code

(j) JASC Code 2560: Emergency Equipment.

Issued in Fort Worth, Texas, on November 18, 2009.

Gary B. Roach,

Acting Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. E9–29426 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2009–1123; Directorate Identifier 2009–SW–03–AD; Amendment 39–16127; AD 2009–25–08]

RIN 2120–AA64

Airworthiness Directives; Bell Helicopter Textron Canada (BHTC) Model 407 and Model 427 Helicopters

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for the BHTC Model 407 and Model 427 helicopters. This AD results from mandatory continuing airworthiness information (MCAI) ADs issued by the aviation authority of Canada. The MCAI ADs state that some hydraulic pump driveshaft assemblies may have been delivered with a missing internal plug or fastening rivet. This condition, if not corrected, could result in a loss of hydraulic pressure and subsequent loss of control of the helicopter.

DATES: This AD becomes effective on December 28, 2009.

We must receive comments on this AD by February 9, 2010.

ADDRESSES: You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the instructions for submitting your comments electronically.
- *Fax:* (202) 493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

You may get the service information identified in this AD from Bell Helicopter Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4, telephone (450) 437–2862 or (800) 363–8023, fax (450) 433–0272, or at *http://www.bellcustomer.com/files/.*

Examining the Docket: You may examine the AD docket on the Internet at *http://www.regulations.gov* or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647–5527) is stated in the **ADDRESSES** section of this AD. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: DOT/FAA Southwest Region, Uday Garadi, ASW–111, Aviation Safety Engineer, Rotorcraft Directorate, Regulations and Guidance Group, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222–5123, fax (817) 222–5961.

SUPPLEMENTARY INFORMATION:

Discussion

Transport Canada, which is the aviation authority for Canada, has issued Canadian AD No. CF–2009–03, dated January 22, 2009, to correct an unsafe condition for BHTC Model 407 helicopters, serial numbers (S/N) 53000 through 53408, and S/N 53421 through 53459. Transport Canada has also issued Canadian AD No. CF–2009–04, dated January 22, 2009, to correct an unsafe condition for Model 427 helicopters, S/N 56001 through 56046. These MCAI ADs state that helicopters with hydraulic pump input shaft, part number (P/N) 407–340–107–101, and interconnect adapter, P/N 407–340–108–101, that were installed in accordance with BHTC Technical Bulletin (TB) No. 407–01–30, Revision A, dated May 21, 2003 (for Model 407 helicopters), or TB No. 427–05–19, dated January 7, 2005 (for Model 427

helicopters), are not affected by the MCAI ADs. The MCAI ADs further state that some hydraulic pump driveshaft assemblies, P/N 406–040–072–105, may have been delivered with a missing internal plug or fastening rivet. This condition, if not corrected, could result in a loss of hydraulic pressure and subsequent loss of control of the helicopter.

You may obtain further information by examining the MCAI ADs and any related service information in the AD docket.

FAA's Evaluation and Unsafe Condition Determination

These helicopters have been approved by the aviation authority of Canada, and are approved for operation in the United States. Pursuant to our bilateral agreement with Canada, they have notified us of the unsafe condition described in the MCAI ADs. We are issuing this AD because we evaluated all information provided by Transport Canada and determined the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs.

Differences Between This AD and the MCAI ADs

This AD differs from MCAI AD No. CF–2009–03, applicable to Model 407 helicopters, and MCAI AD No. CF–2009–04, applicable to Model 427 helicopters, both dated January 22, 2009, which require compliance with a part of the BHTC service information that specifies inspecting ''spares stock'', and also require attaching a ''serviceable'' tag to parts in inventory. This AD does not require either of those actions. Also, the compliance section of this AD refers to ''50 hours time-in-service'' instead of ''50 hours air time,'' which is used in both of the MCAI ADs. Further, the MCAI ADs require performing actions in accordance with the BHTC alert service and technical bulletins or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada. The BHTC alert service and technical bulletins describe additional inspections for wear that are not required by this AD; we have listed those bulletins in the ''Related Information'' section of this AD. Finally, the MCAI AD for the Model 427 helicopter applies to S/N 58001 and S/N 58002. Per U.S. Type Certificate R00001RC, neither of these helicopters is eligible for an FAA Airworthiness Certificate and thus, this AD does not apply to them.

Costs of Compliance

We estimate that this AD will affect about 259 BHTC Model 407 helicopters and 16 BHTC Model 427 helicopters of U.S. registry. We also estimate that it will take about 1.5 work-hours per helicopter to perform a one-time inspection of the hydraulic pump driveshaft assembly, P/N 406–040–072–105, to determine the presence of the internal plug in the center of the driveshaft, as well as the fastening rivet that holds the internal plug in place, and 1 work-hour to install a replacement shaft and adapter, if necessary. The average labor rate is $80 per work-hour. Required parts will cost about $1,850 per helicopter, to install an input shaft and adapter, if needed. Based on these figures, we estimate the cost of this AD on U.S. operators will be $563,750 or $2,050 per helicopter to inspect and replace parts.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. We find that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because a hydraulic pump driveshaft assembly with a missing internal plug or fastening rivet could result in a loss of hydraulic pressure and subsequent loss of control of the helicopter. Because the compliance time to correct this unsafe condition is short, we have determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. However, we invite you to send us any written data, views, or arguments concerning this AD. Send your comments to an address listed under the **ADDRESSES** section of this AD. Include ''Docket No. FAA–2009–1123; Directorate Identifier 2009–SW–03–AD'' at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to *http://www.regulations.gov* including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. ''Subtitle VII: Aviation Programs,'' describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in ''Subtitle VII, Part A, Subpart III, Section 44701: General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

Therefore, I certify this AD:

1. Is not a ''significant regulatory action'' under Executive Order 12866;

2. Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

■ Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new AD:

2009–25–08 Bell Helicopter Transport Canada: Amendment 39–16127. Docket No. FAA–2009–1123; Directorate Identifier 2009–SW–03–AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective on December 28, 2009.

Other Affected ADs

(b) None.

Applicability

(c) This AD applies to Model 407 helicopters, serial numbers (S/N) 53000 through 53408, and S/N 53421 through 53459, and Model 427 helicopters, S/N 56001 through 56046, certificated in any category. This AD does not apply to helicopters with hydraulic pump input shaft, part number (P/N) 407–340–107–101, and interconnect adapter, P/N 407–340–108–101, which is a direct replacement for hydraulic pump driveshaft assembly, P/N 406–040–072–105, and the subject of this AD.

Reason

(d) The mandatory continuing airworthiness information (MCAI) ADs state that some hydraulic pump driveshaft assemblies, P/N 406–040–072–105, may have been delivered with a missing internal plug or fastening rivet. This condition, if not corrected, could result in a loss of hydraulic pressure and subsequent loss of control of the helicopter.

Actions and Compliance

(e) During the next driveshaft lubrication, or within 50 hours time-in-service or 30 calendar days, whichever occurs first, unless already accomplished, do the following:

(1) Perform a one-time inspection of the hydraulic pump driveshaft assembly, P/N 406–040–072–105, to determine if an internal plug and a fastening rivet are correctly installed.

(2) If either the internal plug, P/N 406–040–094–101, or the fastening rivet, P/N MS20613–3P10, is not installed, replace the hydraulic pump driveshaft assembly, P/N 406–040–072–105, with an airworthy hydraulic pump input shaft, P/N 407–340–107–101, and interconnect adapter, P/N 407–340–108–101.

Differences Between This AD and the MCAI ADs

(f) This AD differs from MCAI AD No. CF–2009–03, applicable to Model 407 helicopters, and MCAI AD No. CF–2009–04, applicable to Model 427 helicopters, both dated January 22, 2009, which require compliance with a part of the BHTC service information that specifies inspecting ''spares stock'', and also require attaching a ''serviceable'' tag to parts in inventory. This AD does not require either of those actions. Also, the compliance section of this AD refers to ''50 hours time-in-service'' instead of ''50 hours air time,'' which is used in both of the MCAI ADs. Further, the MCAI ADs require performing actions in accordance with the BHTC alert service and technical bulletins or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada. The BHTC alert service and technical bulletins describe additional inspections for wear that are not required by this AD; we have listed those bulletins in the ''Related Information'' section of this AD. Finally, the MCAI AD for the Model 427 helicopter applies to S/N 58001 and S/N 58002. Per U.S. Type Certificate R00001RC, neither of these helicopters is eligible for an FAA Airworthiness Certificate and thus, this AD does not apply to them.

Other Information

(g) Alternative Methods of Compliance (AMOCs): The Manager, Safety Management Group, FAA, ATTN: Uday Garadi, Aviation Safety Engineer, Rotorcraft Directorate, Regulations and Guidance Group, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222–5123, fax (817) 222–5961, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

(h) For service information identified in this AD, contact Bell Helicopter Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4, telephone (450) 437–2862 or (800) 363–8023, fax (450) 433–0272, or at *http://www.bellcustomer.com/files/.*

Related Information

(i) Transport Canada MCAI Airworthiness Directive AD No. CF–2009–03 and No. CF–2009–04, both dated January 22, 2009; and Bell Helicopter Textron Canada Alert Service Bulletin No. 407–08–83, dated May 22, 2008, Alert Service Bulletin No. 427–08–22, dated June 26, 2008, Technical Bulletin No. 407–01–30, Revision A, dated May 21, 2003, and Technical Bulletin No. 427–05–19, dated January 7, 2005 contain related information.

Joint Aircraft System/Component (JASC) Code

(j) JASC Code 2913: Hydraulic Pump, main.

Issued in Fort Worth, Texas, on November 19, 2009.

Gary B. Roach,

Acting Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. E9–29427 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2009–0888; Airspace Docket No. 09–ASO–23]

Modification of Jet Route J–20; Florida

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action modifies Jet Route J–20 by terminating the route at the Orlando, FL, very high frequency omnidirectional range/tactical air navigation (VORTAC) facility, thereby eliminating a portion of J–20 that is no longer needed. This action will ensure the efficient use of airspace within the National Airspace System (NAS).

DATES: Effective 0901 UTC, February 11, 2010. The Director of the Federal Register approves this incorporation by reference action under 1 CFR part 51, subject to the annual revision of FAA Order 7400.9 and publication of conforming amendments.

FOR FURTHER INFORMATION CONTACT: Paul Gallant, Airspace and Rules Group, Office of System Operations Airspace and AIM, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone: (202) 267–8783.

SUPPLEMENTARY INFORMATION:

History

On Friday, October 23, 2009, the FAA published in the **Federal Register** a notice of proposed rulemaking to modify jet route J–20 (74 FR 54765). Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal. No comments were received.

The Rule

The FAA is amending Title 14, Code of Federal Regulations (14 CFR) part 71 to eliminate the segment of J–20 that extends between the Orlando VORTAC and the Virginia Key very high frequency omnidirectional range/distance measuring equipment (VOR/DME). The FAA has determined that this portion of J–20 is no longer required. Currently, J–20 parallels jet route J–53, between the Miami area and DEARY intersection (southeast of the Orlando VORTAC). At DREARY, J–20 makes a left turn to the Orlando VORTAC where it converges with J–53. This can cause a problem when aircraft are parallel on both J–20 and J–53. Jet route J–113 provides a suitable northbound replacement route for the J–20 segment. In addition, this change provides air traffic control with more time to get climbing aircraft to their requested altitudes, thereby enhancing system efficiency.

Jet routes are published in paragraph 2004 of FAA Order 7400.9T dated August 27, 2009 and effective September 15, 2009, which is incorporated by reference in 14 CFR 71.1. The jet route listed in this document will be subsequently published in the Order.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation: (1) Is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under Department of Transportation (DOT) Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This regulation is within the scope of that authority as it amends a portion of the en route structure to enhance the safe and efficient use of the NAS in Florida.

Environmental Review

The FAA has determined that this action qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1E, ''Environmental Impacts: Policies and Procedures,'' paragraph 311a and 311b. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

List of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (air).

Adoption of the Amendment

■ In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR part 71 as follows:

PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

■ 1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order 7400.9T, Airspace Designations and Reporting Points, Dated August 27, 2009 and effective September 15, 2009, is amended as follows:

Paragraph 2004 Jet Routes.

* * * * *

J–20 [Modified]

From Seattle, WA, via Yakima, WA; Pendleton, OR; Donnelly, ID; Pocatello, ID; Rock Springs, WY; Falcon, CO; Hugo, CO; Lamar, CO; Liberal, KS; INT Liberal 137° and Will Rogers, OK, 284° radials; Will Rogers; Belcher, LA; Jackson, MS; Montgomery, AL; Meridian, MS; Seminole, FL; INT Seminole 129° and Orlando, FL, 306° radials; to Orlando.

* * * * *

Issued in Washington, DC, on December 4, 2009.

Kelly J. Neubecker,

Acting Manager, Airspace and Rules Group.

[FR Doc. E9–29394 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2009–0885; Airspace Docket No. 09–ASO–17]

Revision of Area Navigation (RNAV) Route Q–108; Florida

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action revises the alignment of high altitude RNAV route Q–108, which currently extends between the GADAY and CLAWZ waypoints (WP) in Florida. The FAA is taking this action to enhance the efficiency of the National Airspace System in the northern Florida area.

DATES: Effective 0901 UTC, February 11, 2010. The Director of the Federal Register approves this incorporation by reference action under 1 CFR part 51, subject to the annual revision of FAA Order 7400.9 and publication of conforming amendments.

FOR FURTHER INFORMATION CONTACT: Paul Gallant, Airspace and Rules Group, Office of System Operations Airspace and AIM, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone: (202) 267–8783.

SUPPLEMENTARY INFORMATION:

History

On Friday, October 23, 2009, the FAA published in the **Federal Register** a notice of proposed rulemaking to revise area navigation route Q–108 (74 FR 54766). Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal. No comments were received.

The Rule

The FAA is amending Title 14, Code of Federal Regulations (14 CFR) part 71 by revising the description of high altitude RNAV route Q–108. The route currently extends between the GADAY and CLAWZ waypoints. This action realigns the route to terminate at the HKUNA WP, instead of CLAWZ, where it will join the PIGLT TWO standard terminal arrival (STAR) serving the Orlando International Airport, FL. In addition, two new WPs, IZZEY and FRNKS, are added to Q–108 between GADAY and HKUNA. This change shifts the alignment of Q–108 slightly to the south of its current track. This revision enhances the efficiency of the route structure in the northern Florida area.

High altitude RNAV routes are published in paragraph 2006 of FAA Order 7400.9T dated August 27, 2009, and effective September 15, 2009, which is incorporated by reference in 14 CFR 71.1. The RNAV route listed in this document will be subsequently published in the Order.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation: (1) Is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under Department of Transportation (DOT) Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, when promulgated, will not have a significant

economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This regulation is within the scope of that authority as it amends a portion of the en route structure to enhance the safe and efficient use of the NAS in northern Florida .

Environmental Review

The FAA has determined that this action qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1E, ''Environmental Impacts: Policies and Procedures,'' paragraph 311a and 311b. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

List of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (air).

Adoption of the Amendment

■ In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR part 71 as follows:

PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

■ 1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order 7400.9T, Airspace Designations and Reporting Points, dated August 27, 2009, and effective September 15, 2009, is amended as follows:

Paragraph 2006 United States Area Navigation Routes.

* * * * *

Q–108 GADAY to HKUNA [Revised]

GADAY Lat. 31°02′28″ N., Long. 86°08′02″ W.
IZZEY Lat. 30°56′59″ N., Long. 85°30′14″ W.
FRNKS Lat. 30°41′58″ N., Long. 83°46′33″ W.
HKUNA Lat. 30°36′02″ N., Long. 83°05′36″ W.

* * * * *

Issued in Washington, DC, on December 4, 2009.

Kelly J. Neubecker,

Acting Manager, Airspace and Rules Group.

[FR Doc. E9–29387 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2009–0824; Airspace Docket No. 09–AAL–11]

RIN 2120–AA66

Revision of Colored Federal Airways; Alaska

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action revises two Colored Federal Airways, Green 16 (G–16), and Blue 26 (B–26), in Alaska. The FAA is taking this action in preparation of the eventual decommissioning of the Barter Island (BTI) Non-directional Beacon (NDB) at the Village of Kaktovik, Alaska.

DATES: Effective 0901 UTC, February 11, 2009. The Director of the Federal Register approves this incorporation by reference action under 1 CFR part 51, subject to the annual revision of FAA Order 7400.9 and publication of conforming amendments.

FOR FURTHER INFORMATION CONTACT: Ken McElroy, Airspace and Rules Group, Office of System Operations Airspace and AIM, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone: (202) 267–8783.

SUPPLEMENTARY INFORMATION:

History

On October 5, 2009, the FAA published in the **Federal Register** a notice of proposed rulemaking (NPRM) to establish two Colored Federal Airways in Alaska (74 FR 51098). Interested parties were invited to participate in this rulemaking effort by submitting written comments on this proposal. No comments were received in response to the NPRM. The NPRM inadvertently stated that T–73 was established to continue IFR service to the Village of Kaktovik, Alaska, it should have read T–273. With the exception of this editorial change, this amendment is the same as that published in the notice of proposed rulemaking.

The Rule

This action amends Title 14, Code of Federal Regulations (14 CFR) part 71, by revising two Colored Federal Airways, G–16 and B–26 by removing the segment to the BTI NDB from each airway description. In a separate action, one Area Navigation (RNAV) route T–228 was revised, and T–273 was established to continue IFR service to the Village of Kaktovik, Alaska. The BTI NDB decommissioning proposal was publicly circulated in notice number 06–AAL–49NR. After reviewing public comment, the FAA decided that keeping the NDB was not feasible and that it should be decommissioned.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation: (1) Is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under Department of Transportation (DOT) Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This regulation is

within the scope of that authority as it revises Colored Federal Airways in Alaska.

Environmental Review

The FAA has determined that this action qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1E, Environmental Impacts: Polices and Procedures, paragraph 311a. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

List of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (air).

Adoption of the Amendment

■ In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR part 71 as follows:

PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS

■ 1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order 7400.9T, Airspace Designations and Reporting Points, signed August 27, 2009, and effective September 15, 2009, is to be amended as follows:

Paragraph 6009(a) Green Federal Airways.

* * * * *

G–16 [Revised]

From Point Lay, AK, NDB; Wainwright Village, AK, NDB; Browerville, AK, NDB; Nuiqsut Village, AK, NDB; to Put River, AK, NDB.

* * * * *

Paragraph 6009(d) Blue Federal Airways.

* * * * *

B–26 [Revised]

From Chena, AK, NDB, to Yukon River, AK, NDB.

* * * * *

Issued in Washington, DC, December 3, 2009.

Kenneth L. McElroy,

Acting Manager, Airspace and Rules Group.

[FR Doc. E9–29396 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Parts 510 and 522

[Docket No. FDA–2009–N–0665]

New Animal Drugs; Change of Sponsor; Azaperone

AGENCY: Food and Drug Administration, HHS.

ACTION: Final rule.

SUMMARY: The Food and Drug Administration (FDA) is amending the animal drug regulations to reflect a change of sponsor for a new animal drug application (NADA) from Schering-Plough Animal Health Corp. to Janssen Pharmaceutica NV.

DATES: This rule is effective December 11, 2009.

FOR FURTHER INFORMATION CONTACT: David R. Newkirk, Center for Veterinary Medicine (HFV–100), Food and Drug Administration, 7500 Standish Pl., Rockville, MD 20855, 240–276–8307, e-mail: *david.newkirk@fda.hhs.gov*.

SUPPLEMENTARY INFORMATION: Schering-Plough Animal Health Corp., 556 Morris Ave., Summit, NJ 07901, has informed FDA that it has transferred ownership of, and all rights and interest in, approved NADA 115–732 for STRESNIL (azaperone) Injection to Janssen Pharmaceutica NV, Turnhoutseweg 30, B–2340 Beerse, Belgium. Accordingly, the agency is amending the regulations in 21 CFR 522.150 to reflect the transfer of ownership and a current format.

In addition, Janssen Pharmaceutica NV is not currently listed in the animal drug regulations as a sponsor of an approved application. Accordingly, 21 CFR 510.600(c) is being amended to add entries for this sponsor.

This rule does not meet the definition of ''rule'' in 5 U.S.C. 804(3)(A) because it is a rule of ''particular applicability.'' Therefore, it is not subject to the congressional review requirements in 5 U.S.C. 801–808.

List of Subjects

21 CFR Part 510

Administrative practice and procedure, Animal drugs, Labeling, Reporting and recordkeeping requirements.

21 CFR Part 522

Animal drugs.

■ Therefore, under the Federal Food, Drug and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs and redelegated to the Center for Veterinary Medicine, 21 CFR parts 510 and 522 are amended as follows:

PART 510—NEW ANIMAL DRUGS

■ 1. The authority citation for 21 CFR part 510 continues to read as follows:

Authority: 21 U.S.C. 321, 331, 351, 352, 353, 360b, 371, 379e.

■ 2. In § 510.600, in the table in paragraph (c)(1), alphabetically add an entry for ''Janssen Pharmaceutica NV''; and in the table in paragraph (c)(2), numerically add an entry for ''012578'' to read as follows:

§ 510.600 Names, addresses, and drug labeler codes of sponsors of approved applications.

* * * * *

(c) * * *

(1) * * *

Firm name and address	Drug labeler code
* * * * *	
Janssen Pharmaceutica NV, Turnhoutseweg 30, B–2340 Beerse, Belgium	012578
* * * * *	

(2) * * *

Drug labeler code	Firm name and address
* * * * *	
012578	Janssen Pharmaceutica NV, Turnhoutseweg 30, B–2340 Beerse, Belgium
* * * * *	

* * * * *

PART 522—IMPLANTATION OR INJECTABLE DOSAGE FORM NEW ANIMAL DRUGS

■ 3. The authority citation for 21 CFR part 522 continues to read as follows:

Authority: 21 U.S.C. 360b.

■ 4. Revise § 522.150 to read as follows:

§ 522.150 Azaperone.

(a) *Specifications.* Each milliliter of solution contains 40 milligrams (mg) azaperone.

(b) *Sponsor.* See No. 012578 in § 510.600(c) of this chapter.

(c) *Conditions of use*—(1) *Indications for use.* For control of aggressiveness when mixing or regrouping weanling or feeder pigs weighing up to 80 pounds.

(2) *Dosage.* 2.2 mg per kilogram (1 mg per pound) by deep intramuscular injection.

(3) *Limitations.* Federal law restricts this drug to use by or on the order of a licensed veterinarian.

Dated: December 7, 2009.

Bernadette Dunham,

Director, Center for Veterinary Medicine.

[FR Doc. E9–29494 Filed 12–10–09; 8:45 am]

BILLING CODE 4160–01–S

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 165

[Docket No. USCG–2009–0484]

RIN 1625–AA00

Safety Zone; San Diego Parade of Lights Fireworks; San Diego Bay, CA

AGENCY: Coast Guard, DHS.

ACTION: Temporary final rule.

SUMMARY: The Coast Guard proposes a safety zone upon the navigable waters of San Diego Bay in San Diego, CA in support of the San Diego Parade of Lights Fireworks. This safety zone is necessary to provide for the safety of the participants, crew, spectators, participating vessels, and other users of the waterway. Persons and vessels are prohibited from entering into, transiting through, or anchoring within this safety zone unless authorized by the Captain of the Port or his designated representative.

DATES: This rule is effective from 5:30 p.m. to 10 p.m., each day, on December 13, 2009, and December 20, 2009.

ADDRESSES: Comments and material received from the public, as well as documents mentioned in this preamble as being available in the docket, are part of docket USCG–2009–0484 and are available online by going to *http://www.regulations.gov,* inserting USCG–2009–0484 in the ''Keyword'' box, and then clicking ''Search.'' This material is also available for inspection or copying at the Docket Management Facility (M–30), U.S. Department of Transportation, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: If you have questions on this temporary rule, call or e-mail Petty Officer Shane Jackson, Waterways Management, U.S. Coast Guard Sector San Diego at telephone 619–278–7262, E-mail *Shane.E.Jackson@uscg.mil.* If you have questions on viewing the docket, call Renee V. Wright, Program Manager, Docket Operations, telephone 202–366–9826.

SUPPLEMENTARY INFORMATION:

Regulatory Information

On September 29, 2009 we published a notice of proposed rulemaking (NPRM) entitled Safety Zone; San Diego Parade of Lights Fireworks; San Diego, CA in the **Federal Register** (74 FR 49831). We received no comments on the proposed rule. Additionally, no public meeting was requested, and none was held.

Background and Purpose

Fireworks & Stage FX Inc is sponsoring the San Diego Parade of Lights Fireworks, which will include a fireworks presentation from a barge in San Diego Bay. This temporary safety zone is necessary to provide for the safety of the crew, spectators, participants, and other vessels and users of the waterway.

Discussion of Comments and Changes

No comments were submitted in response to the NPRM. After publication of the NPRM, the sponsor informed the Coast Guard that changes to the fireworks show plans required enlargement of the safety zone. The NPRM described a *safety zone extending in a 400 foot radius around a barge in approximate position 32°43′23″ N, 117°11′57″ W. Instead, in* order to protect members of the public from the hazards associated with fireworks displays, the zone will extend in a 600 foot radius from the same approximate position. *Vessel traffic will continue to be able to pass safely around the zone, and no other negative impacts are expected to result from this change.*

Regulatory Analyses

We developed this rule after considering numerous statutes and executive orders related to rulemaking. Below we summarize our analyses based on 13 of these statutes or executive orders.

Regulatory Planning and Review

This rule is not a significant regulatory action under section 3(f) of Executive Order 12866, Regulatory Planning and Review, and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. The Office of Management and Budget has not reviewed it under that Order.

We expect the economic impact of this proposed rule to be so minimal that a full Regulatory Evaluation is unnecessary. This determination is based on the size and location of the safety zone. Commercial vessels will not be hindered by the safety zone. Recreational vessels will not be allowed to transit through the designated safety zone during the specified times unless authorized to do so by the Captain of the Port or his designated representative.

Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601–612), we have considered whether this rule would have a significant economic impact on a substantial number of small entities. The term ''small entities'' comprises small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000.

The Coast Guard certifies under 5 U.S.C. 605(b) that this rule will not have a significant economic impact on a substantial number of small entities.

This rule will affect the following entities, some of which may be small entities: The owners or operators of vessels intending to transit or anchor in a portion of the San Diego Bay from 5:30 p.m. to 10 p.m. on December 13 and 20, 2009.

This safety zone will not have a significant economic impact on a substantial number of small entities for the following reasons. Vessel traffic can pass safely around the zone. Additionally, before the effective period, the Coast Guard will publish a local notice to mariners (LNM).

Assistance for Small Entities

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121), in the NPRM we offered to assist small entities in understanding the rule so that they could better evaluate its effects on them and participate in the rulemaking process.

Small businesses may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of the Coast Guard, call 1–888–REG–FAIR (1–888–734–3247). The Coast Guard will not retaliate against small entities that question or

complain about this rule or any policy or action of the Coast Guard.

Collection of Information

This rule calls for no new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520).

Federalism

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect on State or local governments and would either preempt State law or impose a substantial direct cost of compliance on them. We have analyzed this rule under that Order and have determined that it does not have implications for federalism.

Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531–1538) requires Federal agencies to assess the effects of their discretionary regulatory actions. In particular, the Act addresses actions that may result in the expenditure by a State, local, or tribal government, in the aggregate, or by the private sector of $100,000,000 or more in any one year. Though this rule will not result in such an expenditure, we do discuss the effects of this rule elsewhere in this preamble.

Taking of Private Property

This rule will not effect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

Civil Justice Reform

This rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

Protection of Children

We have analyzed this rule under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This rule is not an economically significant rule and does not create an environmental risk to health or risk to safety that may disproportionately affect children.

Indian Tribal Governments

This rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, because it does not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

Energy Effects

We have analyzed this rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. We have determined that it is not a ''significant energy action'' under that order because it is not a ''significant regulatory action'' under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The Administrator of the Office of Information and Regulatory Affairs has not designated it as a significant energy action. Therefore, it does not require a Statement of Energy Effects under Executive Order 13211.

Technical Standards

The National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note) directs agencies to use voluntary consensus standards in their regulatory activities unless the agency provides Congress, through the Office of Management and Budget, with an explanation of why using these standards would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.,* specifications of materials, performance, design, or operation; test methods; sampling procedures; and related management systems practices) that are developed or adopted by voluntary consensus standards bodies.

This rule does not use technical standards. Therefore, we did not consider the use of voluntary consensus standards.

Environment

We have analyzed this rule under Department of Homeland Security Management Directive 023–01 and Commandant Instruction M16475.lD, which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321–4370f), and have concluded this action is one of a category of actions which do not individually or cumulatively have a significant effect on the human environment. This rule is categorically excluded, under figure 2–1, paragraph (34)(g.), of the Instruction because the rule involves the establishment of a safety zone. An environmental analysis checklist and a categorical exclusion determination are available in the docket where indicated under **ADDRESSES.**

List of Subjects in 33 CFR Part 165

Harbors, Marine safety, Navigation (water), Reporting and recordkeeping requirements, Security measures, Waterways.

■ For the reasons discussed in the preamble, the Coast Guard amends 33 CFR part 165 as follows:

PART 165—REGULATED NAVIGATION AREAS AND LIMITED ACCESS AREAS

■ 1. The authority citation for part 165 continues to read as follows:

Authority: 33 U.S.C. 1226, 1231; 46 U.S.C. Chapter 701, 701, 3306, 3703; 50 U.S.C. 191, 195; 33 CFR 1.05–1, 6.04–1, 6.04–6, and 160.5; Pub. L. 107–295, 116 Stat. 2064; Department of Homeland Security Delegation No. 0170.1.

■ 2. Add temporary § 165.T11–222 to read as follows:

§ 165.T11–222 Safety zone; San Diego Parade of Lights Fireworks; San Diego Bay, California.

(a) *Location.* The following area is a safety zone: All waters of San Diego Bay, from surface to bottom, within a 600 foot radius around a barge in approximate position 32°43′23″ N, 117°11′57″ W.

(b) *Enforcement Period.* This section will be enforced from 5:30 p.m. to 10 p.m. on both December 13, 2009, and December 20, 2009. If the event concludes prior to the scheduled termination time, the Captain of the Port will cease enforcement of this safety zone and will announce that fact via Broadcast Notice to Mariners.

(c) *Definitions.* As used in this section, *designated representative* means any commissioned, warrant, or petty officers of the Coast Guard on board Coast Guard, Coast Guard Auxiliary, or local, State, or Federal law enforcement vessels who have been authorized to act on the behalf of the Captain of the Port.

(d) *Regulations.* (1) Entry into, transit through or anchoring within this safety zone is prohibited unless authorized by the Captain of the Port of San Diego or his designated on-scene representative.

(2) Mariners requesting permission to transit through the safety zone may request authorization to do so from the Patrol Commander. The Patrol Commander may be contacted on VHF–FM Channel 16.

(3) All persons and vessels must comply with the instructions of the Coast Guard Captain of the Port or the designated representative.

(4) Upon being hailed by U.S. Coast Guard patrol personnel by siren, radio,

flashing light, or other means, the operator of a vessel must proceed as directed.

(5) The Coast Guard may be assisted by other Federal, State, or local agencies.

Dated: November 19, 2009.

T.H. Farris,

Captain, U.S. Coast Guard, Captain of the Port San Diego.

[FR Doc. E9–29489 Filed 12–10–09; 8:45 am]

BILLING CODE 9110–04–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 51 and 52

[EPA–HQ–OAR–2004–0014: FRL–9089–4]

RIN 2060–AP73

Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Inclusion of Fugitive Emissions; Interim Final Rule; Stay

AGENCY: Environmental Protection Agency (EPA).

ACTION: Interim final rule; Stay.

SUMMARY: EPA is making an interim final determination to provide an additional stay of the regulations concerning the inclusion of fugitive emissions.

DATES: The amendments to 40 CFR parts 51 and 52 in this rule are effective from December 31, 2009 through March 31, 2010. Effective December 31, 2009, the following CFR sections are administratively stayed until March 31, 2010: 40 CFR 51.165(a)(1)(v)(G), (a)(1)(vi)(C)(3), (a)(1)(ix), (a)(1)(xxviii)(B)(2), (a)(1)(xxviii)(B)(4), (a)(1)(xxxv)(A)(1), (a)(1)(xxxv)(B)(1), (a)(1)(xxxv)(C), (a)(1)(xxxv)(D), (a)(2)(ii)(B), (a)(6)(iii), (a)(6)(iv), and (f)(4)(i)(D); 40 CFR 51.166, (a)(7)(iv)(b), (b)(2)(v), (b)(3)(iii)(c), (b)(3)(iii)(d), (b)(20), (b)(40)(ii)(b), (b)(40)(ii)(d), (b)(47)(i)(a), (b)(47)(ii)(a), (b)(47)(iii), (b)(47)(iv), (r)(6)(iii) and (r)(6)(iv), and (w)(4)(i)(d); 40 CFR part 51, Appendix S, paragraphs II.A.5(vii), II.A.6(iii), II.A.9, II.A.24(ii)(b), II.A.24(ii)(d), II.A.30(i)(a), II.A.30(ii)(a), II.A.30(iii), II.A.30(iv), IV.I.1(ii), IV.J.3, IV.J.4, and IV.K.4(i)(d); and 40 CFR 52.21, (a)(2)(iv)(b), (b)(2)(v), (b)(3)(iii)(b), (b)(3)(iii)(c), (b)(20), (b)(41)(ii)(b), (b)(41)(ii)(d), (b)(48)(i)(a), (b)(48)(ii)(a), (b)(48)(iii), (b)(48)(iv), (r)(6)(iii), (r)(6)(iv), and (aa)(4)(i)(d).

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2004–0014. All documents in the docket are listed in the Federal Docket Management System index at *http://www.regulations.gov*. Although listed in the index, some information is not publicly available, *e.g.,* confidential business information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *http://www.regulations.gov* or in hard copy at the Air and Radiation Docket, EPA West Building, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air and Radiation Docket is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: Ms. Carrie Wheeler, Air Quality Policy Division, (C504–03), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711; telephone number (919) 541–9771; fax number (919) 541–5509; or e-mail address: *wheeler.carrie@epa.gov*.

SUPPLEMENTARY INFORMATION: *Regulated entities.* Entities potentially affected by this action include sources in all industry groups. The majority of sources potentially affected are expected to be in the following groups.

Industry group	SIC [a]	NAICS [b]
Electric Services	491	221111, 221112, 221113, 221119, 221121, 221122.
Petroleum Refining	291	324110.
Industrial Inorganic Chemicals	281	325181, 325120, 325131, 325182, 211112, 325998, 331311, 325188.
Industrial Organic Chemicals	286	325110, 325132, 325192, 325188, 325193, 325120, 325199.
Miscellaneous Chemical Products	289	325520, 325920, 325910, 325182, 325510.
Natural Gas Liquids	132	211112.
Natural Gas Transport	492	486210, 221210.
Pulp and Paper Mills	261	322110, 322121, 322122, 322130.
Paper Mills	262	322121, 322122.
Automobile Manufacturing	371	336111, 336112, 336211, 336992, 336322, 336312, 336330, 336340, 336350, 336399, 336212, 336213.
Pharmaceuticals	283	325411, 325412, 325413, 325414.
Mining	211, 212, 213	21.
Agriculture, Fishing and Hunting	111, 112, 113, 115	11.

[a] Standard Industrial Classification.
[b] North American Industry Classification System.

Entities potentially affected by this action also include state, local, and tribal governments.

World Wide Web. In addition to being available in the docket, an electronic copy of this final rule will also be available on the World Wide Web. Following signature by the EPA Administrator, a copy of this final rule will be posted in the regulations and standards section of our New Source Review (NSR) home page located at *http://www.epa.gov/nsr.*

Organization of this Document. The following outline is provided to aid in locating information in this preamble.

I. Background Information
II. What Action Is EPA Taking?
III. Statutory and Executive Order Reviews
A. Executive Order 12866: Regulatory Planning and Review
B. Paperwork Reduction Act
C. Regulatory Flexibility Act
D. Unfunded Mandates Reform Act
E. Executive Order 13132: Federalism
F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments
G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks
H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
I. National Technology Transfer and Advancement Act
J. Executive Order 12898: Federal Actions To Address Environmental Justice in

Minority Populations and Low-Income Populations
K. Congressional Review Act
IV. Statutory Authority

I. Background Information

On December 19, 2008, the EPA (''we'') issued a final rule revising our requirements of the major NSR programs regarding the treatment of fugitive emissions (''Fugitive Emissions Rule''). 73 FR 77882. The final rule required fugitive emissions to be included in determining whether a physical or operational change results in a major modification only for sources in industries that have been designated through rulemaking under section 302(j) of the Clean Air Act (CAA). The final rule amended all portions of the major NSR program regulations: Permit requirements, the PSD program, and the emission offset interpretive ruling.

On February 17, 2009, the Natural Resources Defense Council submitted a petition for reconsideration of the December 2008 final rule as provided for in CAA 307(d)(7)(B).[1]

On April 24, 2009, we responded to the February 17, 2009 petition by letter indicating that we were convening a reconsideration proceeding for the inclusion of fugitive emissions challenged in the petition and granting a 3-month administrative stay of the rule contained in the federal Prevention of Significant Deterioration (PSD) program at 40 CFR Parts 51 and 52. The letter also indicated that we would publish a notice of proposed rulemaking ''in the near future'' to address the specific issues for which we are granting reconsideration.[2]

The administrative stay of the Fugitive Emissions Rule became effective on September 30, 2009. *See* 74 FR 50115, FR Doc. E9–23503. As noted above, our authority under section 307(d)(7)(B) to stay a rule or portion thereof solely under the Administrator's discretion is limited to 3 months.

II. What Action Is EPA Taking?

We are making an interim final determination to provide an additional stay for 3 months. The 3-month stay that began on September 30, 2009 expires on December 30, 2009. At that time, facilities will be required to comply with the final rule as published [73 FR 77882] unless an additional stay is set in place. EPA intends to publish a notice in the near future that will propose an additional stay of the Fugitive Emissions during the time period while EPA reconsiders the rule. Since that proposed rule has not yet published, any resulting final action that EPA takes will likely occur after December 30, 2009. EPA is invoking the good cause exception under the Administrative Procedure Act (APA) in not providing an opportunity to comment before this action takes effect (5 U.S.C. 553(b)(3)).

EPA believes that notice-and-comment rulemaking before the effective date of this action is impracticable and contrary to the public interest. EPA has stated in the reconsideration and stay notices (74 FR 188) the reason for granting the 3-month stay. As this reason remains valid, we believe it is still appropriate for a stay to be in effect until we have reached a final decision on the reconsideration. The initial stay expires on December 30, 2009, and EPA does not believe it can complete notice and comment rulemaking to provide an additional stay before that date. It is not in the public's best interest to require compliance with the rules as published during the gap between the two dates. Therefore, EPA believes that it is necessary to use the interim final rulemaking process to provide an additional stay while the public has an opportunity to comment on the upcoming proposed action. EPA anticipates completing that action by March 31, 2010.

III. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is not a ''significant regulatory action'' under the terms of Executive Order 12866 (58 FR 51735, October 4, 1993) and is, therefore, not subject to review under the Executive Order.

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the *Paperwork Reduction Act,* 44 U.S.C. 3501 *et seq.* Burden is defined at 5 CFR 1320.3(b). This action only provides an additional stay of the regulations at 40 CFR parts 51 and 52 concerning the inclusion of fugitive emissions.

However, the Office of Management and Budget (OMB) has previously approved the information collection requirements contained in the existing regulations under the provisions of the *Paperwork Reduction Act,* 44 U.S.C. 3501 *et seq.,* and has assigned OMB control number 2060–0003. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

C. Regulatory Flexibility Act

This interim final rule is not subject to the Regulatory Flexibility Act (RFA), which generally requires an agency to prepare a regulatory flexibility analysis for any rule that will have a significant economic impact on a substantial number of small entities. The RFA applies only to rules subject to notice and comment rulemaking requirements under the APA or any other statute. This rule is not subject to notice and comment requirements under the APA or any other statute because, although the rule is subject to the APA, the Agency has invoked the ''good cause'' exemption under 5 U.S.C. 553(b); therefore, it is not subject to the notice and comment requirement.

D. Unfunded Mandates Reform Act

This action does not contain a federal mandate under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for state, local, and tribal governments, in the aggregate, or the private sector. This action only provides for an additional stay of the regulations at 40 CFR parts 51 and 52 concerning the inclusion of fugitive emissions. Thus, this rule is not subject to the requirements of sections 202 or 205 of the UMRA.

This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. This action only provides an additional stay of the regulations at 40 CFR parts 51 and 52 concerning the inclusion of fugitive emissions and does not impose any additional enforceable duty.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in EO 13132. This action only provides an additional stay of the regulations at 40 CFR parts 51 and 52 concerning the inclusion of fugitive emissions. Thus, EO 13132 does not apply to this rule.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications, as specified in EO 13175 (65 FR 67249, November 9, 2000). This action will not impose any new

[1] John Walke, NRDC, EPA–HQ–OAR–2004–0014–0060.

[2] Lisa Jackson, U.S. EPA, EPA–HQ–OAR–2004–0014–0062

obligations or enforceable duties on tribal governments. Thus, EO 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because this action only provides an additional stay of the regulations at 40 CFR parts 51 and 52 concerning the inclusion of fugitive emissions.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a ''significant energy action'' as defined in Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. This action only provides an additional stay of the regulations at 40 CFR parts 51 and 52 concerning the inclusion of fugitive emissions.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (''NTTAA''), Public Law No. 104–113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.,* materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This action does not involve technical standards. Therefore, EPA is not considering the use of any voluntary consensus standards.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this action will not have a disproportionately high and adverse human health or environmental effects on minority or low income populations because it only provides an additional stay of the regulations at 40 CFR parts 51 and 52 concerning the inclusion of fugitive emissions.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801, *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Section 808 allows the issuing agency to make a rule effective sooner than otherwise provided by the CRA if the agency makes a good cause finding that notice and public procedure is impracticable, unnecessary, or contrary to the public interest. This determination must be supported by a brief statement, 5 U.S.C. 808(2). As stated previously, EPA has made such a good cause finding, including the reasons therefore, and established an effective date of December 31, 2009. EPA will submit a report containing this rule and other required information to the United States Senate, the United States House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register.** This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

IV. Statutory Authority

The statutory authority for this action is provided by section 301(a) of the CAA as amended (42 U.S.C. 7601(a)).

List of Subjects

40 CFR Part 51

Administrative practices and procedures, Air pollution control, Carbon monoxide, Fugitive emissions, Intergovernmental relation, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Transportation, Volatile organic compounds.

40 CFR Part 52

Administrative practices and procedures, Air pollution control, Carbon monoxide, Fugitive emissions, Incorporation by reference, Intergovernmental relation, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Transportation, Volatile organic compounds.

Dated: November 30, 2009.

Lisa P. Jackson,

Administrator.

■ For the reasons discussed in the preamble, the EPA amends 40 CFR parts 51 and 52 as follows:

PART 51—[AMENDED]

■ 1. The authority citation for part 51 continues to read as follows:

Authority: 23 U.S.C. 101; 42 U.S.C. 7401–7671q.

§ 51.165 [Amended]

■ 2. Effective December 31, 2009, 40 CFR 51.165(a)(1)(v)(G), (a)(1)(vi)(C)(*3*), (a)(1)(ix), (a)(1)(xxviii)(B)(*2*), (a)(1)(xxviii)(B)(*4*), (a)(1)(xxxv)(A)(*1*), (a)(1)(xxxv)(B)(*1*), (a)(1)(xxxv)(C), (a)(1)(xxxv)(D), (a)(2)(ii)(B), (a)(6)(iii), (a)(6)(iv), and (f)(4)(i)(D) are stayed until March 31, 2010.

■ 3. Effective December 31, 2009 through March 31, 2010, amend 40 CFR 51.165 to add paragraph (a)(4) to read as follows:

§ 51.165 Permit requirements.

(a) * * *

(4) Each plan may provide that the provisions of this paragraph do not apply to a source or modification that would be a major stationary source or major modification only if fugitive emission to the extent quantifiable are considered in calculating the potential to emit of the stationary source or modification and the source does not belong to any of the following categories:

(i) Coal cleaning plants (with thermal dryers);

(ii) Kraft pulp mills;

(iii) Portland cement plants;

(iv) Primary zinc smelters;

(v) Iron and steel mills;

(vi) Primary aluminum ore reduction plants;

(vii) Primary copper smelters;

(viii) Municipal incinerators capable of charging more than 250 tons of refuse per day;

(ix) Hydrofluoric, sulfuric, or citric acid plants;

(x) Petroleum refineries;
(xi) Lime plants;
(xii) Phosphate rock processing plants;
(xiii) Coke oven batteries;
(xiv) Sulfur recovery plants;
(xv) Carbon black plants (furnace process);
(xvi) Primary lead smelters;
(xvii) Fuel conversion plants;
(xviii) Sintering plants;
(xix) Secondary metal production plants;
(xx) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
(xxi) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
(xxii) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
(xxiii) Taconite ore processing plants;
(xxiv) Glass fiber processing plants;
(xxv) Charcoal production plants;
(xxvi) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;
(xxvii) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.
* * * * *

§ 51.166 [Amended]

■ 4. Effective December 31, 2009, 40 CFR 51.166 (a)(7)(iv)(*b*), (b)(2)(v), (b)(3)(iii)(*c*), (b)(3)(iii)(*d*), (b)(20), (b)(40)(ii)(*b*), (b)(40)(ii)(*d*), (b)(47)(i)(*a*), (b)(47)(ii)(*a*), (b)(47)(iii), (b)(47)(iv), (r)(6)(iii) and (r)(6)(iv), and (w)(4)(i)(*d*) are stayed until March 31, 2010.

■ 5. Effective December 31, 2009 through March 31, 2010, amend 40 CFR 51.166 to add paragraph (i)(l)(ii) to read as follows:

§ 51.166 Prevention of significant deterioration of air quality.

* * * * *
(i) * * *
(1) * * *
(ii) The source or modification would be a major stationary source or major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the stationary source or modification and such source does not belong to any following categories:
(a) Coal cleaning plants (with thermal dryers);
(b) Kraft pulp mills;
(c) Portland cement plants;
(d) Primary zinc smelters;
(e) Iron and steel mills;
(f) Primary aluminum ore reduction plants;
(g) Primary copper smelters;
(h) Municipal incinerators capable of charging more than 250 tons of refuse per day;
(i) Hydrofluoric, sulfuric, or nitric acid plants;
(j) Petroleum refineries;
(k) Lime plants;
(l) Phosphate rock processing plants;
(m) Coke oven batteries;
(n) Sulfur recovery plants;
(o) Carbon black plants (furnace process);
(p) Primary lead smelters;
(q) Fuel conversion plants;
(r) Sintering plants;
(s) Secondary metal production plants;
(t) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
(u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
(v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
(w) Taconite ore processing plants;
(x) Glass fiber processing plants;
(y) Charcoal production plants;
(z) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;
(aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act; or
* * * * *

Appendix S to 40 CFR Part 51 [Amended]

■ 6. Effective December 31, 2009, 40 CFR part 51, Appendix S, paragraphs II.A.5(vii), II.A.6(iii), II.A.9, II.A.24(ii)(*b*), II.A.24(ii)(*d*), II.A.30(i)(*a*), II.A.30(ii)(*a*), II.A.30(iii), II.A.30(iv), IV.I.1(ii), IV.J.3, IV.J.4, and IV.K.4(i)(*d*) are stayed until March 31, 2010.

■ 7. Effective December 31, 2009 through March 31, 2010, amend Appendix S to part 51 to add II.F to read as follows:

Appendix S to Part 51—Emission Offset Interpretative Ruling

* * * * *
II. * * *
F. *Fugitive emission sources.* Section IV.A. of this Ruling shall not apply to a source or modification that would be a major stationary source or major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the stationary source or modification and such source does not belong to any following categories:
(1) Coal cleaning plants (with thermal dryers);
(2) Kraft pulp mills;
(3) Portland cement plants;
(4) Primary zinc smelters;
(5) Iron and steel mills;
(6) Primary aluminum ore reduction plants;
(7) Primary copper smelters;
(8) Municipal incinerators capable of charging more than 250 tons of refuse per day;
(9) Hydrofluoric, sulfuric, or nitric acid plants;
(10) Petroleum refineries;
(11) Lime plants;
(12) Phosphate rock processing plants;
(13) Coke oven batteries;
(14) Sulfur recovery plants;
(15) Carbon black plants (furnace process);
(16) Primary lead smelters;
(17) Fuel conversion plants;
(18) Sintering plants;
(19) Secondary metal production plants;
(20) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
(21) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
(22) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
(23) Taconite ore processing plants;
(24) Glass fiber processing plants;
(25) Charcoal production plants;
(26) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;
(27) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.
* * * * *

PART 52—[AMENDED]

■ 8. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

§ 52.21 [Amended]

■ 9. Effective December 31, 2009, 40 CFR 52.21, (a)(2)(iv)(*b*), (b)(2)(v), (b)(3)(iii)(*b*), (b)(3)(iii)(*c*), (b)(20), (b)(41)(ii)(*b*), (b)(41)(ii)(*d*), (b)(48)(i)(*a*), (b)(48)(ii)(*a*), (b)(48)(iii), (b)(48)(iv), (r)(6)(iii), (r)(6)(iv), and (aa)(4)(i)(*d*) are stayed until March 31, 2010.

■ 10. Effective December 31, 2009 through March 31, 2010, amend 40 CFR 52.21 to add (i)(l)(vii) to read as follows:

§ 52.21 Prevention of significant deterioration of air quality.

* * * * *
(i) * * *
(1) * * *

(vii) The source or modification would be a major stationary source or major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the stationary source or modification and the source does not belong to any of the following categories:

(a) Coal cleaning plants (with thermal dryers);

(b) Kraft pulp mills;

(c) Portland cement plants;

(d) Primary zinc smelters;

(e) Iron and steel mills;

(f) Primary aluminum ore reduction plants;

(g) Primary copper smelters;

(h) Municipal incinerators capable of charging more than 250 tons of refuse per day;

(i) Hydrofluoric, sulfuric, or nitric acid plants;

(j) Petroleum refineries;

(k) Lime plants;

(l) Phosphate rock processing plants;

(m) Coke oven batteries;

(n) Sulfur recovery plants;

(o) Carbon black plants (furnace process);

(p) Primary lead smelters;

(q) Fuel conversion plants;

(r) Sintering plants;

(s) Secondary metal production plants;

(t) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;

(u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;

(v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;

(w) Taconite ore processing plants;

(x) Glass fiber processing plants;

(y) Charcoal production plants;

(z) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;

(aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act; or

* * * * *

[FR Doc. E9–29068 Filed 12–10–09; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

49 CFR Part 172

[Docket No. PHMSA–2009–0238 (HM–224G)]

RIN 2137–AE49

Hazardous Materials: Chemical Oxygen Generators

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA).

ACTION: Final rule; confirmation of effective date.

SUMMARY: PHMSA is confirming the effective date of its direct final rule, published under Docket No. PHMSA–2009–0238 (HM–224G) on October 15, 2009, to amend the Hazardous Materials Regulations by revising the quantity limitation from 25 kg ''gross'' to 25 kg ''net'' for packages of chemical oxygen generators transported aboard cargo aircraft only. The direct final rule stated that it would become effective on November 16, 2009 unless an adverse comment or notice of intent to file an adverse comment was received by November 16, 2009. PHMSA did not receive any adverse comments or notice of intent to file an adverse comment to its October 15, 2009 direct final rule.

DATES: The November 16, 2009 effective date of the direct final rule published on October 15, 2009 (74 FR 52896), is confirmed.

FOR FURTHER INFORMATION CONTACT: T. Glenn Foster, (202) 366–8553, U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Hazardous Materials Standards, 1200 New Jersey Avenue, SE., Washington, DC 20590.

SUPPLEMENTARY INFORMATION:

On January 31, 2007, PHMSA issued a final rule under Docket No. RSPA–04–17664 (HM–224B) to enhance the safety standards for transportation by air of compressed oxygen, other oxidizing gases, and chemical oxygen generators (72 FR 4442). Specifically, the final rule amended the HMR to require cylinders of compressed oxygen and chemical oxygen generators to be transported in an outer packaging that: (1) Meets the same flame penetration resistance standards as required for cargo compartment sidewalls and ceiling panels in transport category airplanes; and (2) provides certain thermal protection capabilities so as to retain its contents during an otherwise controllable cargo compartment fire.

In response to a petition, PHMSA determined it was necessary to revise the quantity limitation for packages of chemical oxygen generators transported aboard cargo aircraft only from 25 kilograms ''gross'' to 25 kilograms ''net,'' and published a direct final rule in the **Federal Register** on October 15, 2009.

PHMSA stated in the direct final rule that it would consider as adverse comments only those comments that explain why a rule would be inappropriate, or would be ineffective or unacceptable without a change. PHMSA did not receive an adverse comment or notice of intent to file an adverse comment in response to the direct final rule. In this present notice, PHMSA is confirming that the effective date for the October 15, 2009 direct final rule is November 16, 2009.

List of Subjects in 49 CFR Part 172

Education, Hazardous materials transportation, Hazardous waste, Labeling, Markings, Packaging and containers, Reporting and recordkeeping requirements.

Issued in Washington, DC, on December 7, 2009 under authority delegated in 49 CFR part 106.

Cynthia L. Quarterman,

Administrator.

[FR Doc. E9–29522 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–60–P

Proposed Rules

Federal Register
Vol. 74, No. 237
Friday, December 11, 2009

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2009–0331; Directorate Identifier 2008–NE–40–AD]

RIN 2120–AA64

Airworthiness Directives; Honeywell International Inc. TFE731 Series Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Supplemental notice of proposed rulemaking (NPRM); reopening of comment period.

SUMMARY: This supplemental NPRM revises an earlier proposed airworthiness directive (AD), for Honeywell International Inc. TFE731 series turbofan engines with certain second stage low-pressure compressor rotor (LPCR) discs and/or certain third stage LPCR discs installed. That proposed AD would have required removing from service certain second stage LPCR discs and/or certain third stage LPCR discs. That proposed AD resulted from a report of cracks found during a fluorescent penetrant inspection (FPI) of the disc bore. This supplemental NPRM revises the proposed AD to correct a P/N error, to clarify the applicability, and to clarify the instructions in the compliance section. This supplemental proposed AD results from a report of cracks found during an FPI of the disc bore. We are proposing this supplemental proposed AD to prevent an uncontained failure of a second stage LPCR disc and or a third stage LPCR disc due to cracks in the bore, which could result in damage to the airplane.

DATES: We must receive any comments on this proposed AD by January 25, 2010.

ADDRESSES: Use one of the following addresses to comment on this proposed AD.

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov* and follow the instructions for sending your comments electronically.
- *Mail:* Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001.
- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- *Fax:* (202) 493–2251.

You can get the service information identified in this proposed AD from Honeywell Engines and Systems Technical Publications and Distribution, M/S 2101–201, P.O. Box 52170, Phoenix, AZ 85072–2170, telephone: Global Customer Care toll free (800) 601–3099; International callers (602) 365–3099.

FOR FURTHER INFORMATION CONTACT: Joseph Costa, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712–4137; e-mail: *joseph.costa@faa.gov;* telephone: (562) 627–5246; fax: (562) 627–5210.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send us any written relevant data, views, or arguments regarding this proposal. Send your comments to an address listed under **ADDRESSES**. Include ''Docket No. FAA–2009–0331; Directorate Identifier 2008–NE–40–AD'' in the subject line of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the proposed AD. We will consider all comments received by the closing date and may amend the proposed AD in light of those comments.

We will post all comments we receive, without change, to *http://www.regulations.gov,* including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this proposed AD. Using the search function of the Web site, anyone can find and read the comments in any of our dockets, including, if provided, the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477–78).

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov;* or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647–5527) is the same as the Mail address provided in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

Discussion

On April 6, 2009, we issued a proposal to amend part 39 of the Code of Federal Regulations (14 CFR part 39) to add an AD, for Honeywell International Inc. TFE731 series turbofan engines with certain second stage LPCR discs and/or certain third stage LPCR discs installed. The proposed AD published as an NPRM in the **Federal Register** on April 13, 2009 (74 FR 16807). That NPRM proposed to require removing from service, certain second and third stage LPCR discs, P/Ns 3072396–1, 3072397–1, 3075109–1, or 2075192–1.

Since we issued that NPRM, we became aware that LPCR disc P/N 2075192–1 is incorrect. We changed the AD to the correct disc P/N of 3075192–1.

We also became aware that the NPRM compliance is unclear in that it describes the affected parts as ''second and third stage LPCR disc''. To clarify, we changed the description to ''a second stage LPCR disc and/or a third stage LPCR disc.'' We also changed the applicability statement from ''* * * turbofan engines with certain low-pressure compressor rotor (LPCR) discs, part numbers (P/Ns) 3072396–1, 3072397–1, 3075190–1, or 2075192–1, installed'' to ''turbofan engines with certain second stage low-pressure compressor rotor (LPCR) discs, part number (P/N) 3072396–1 or 3075190–1, and/or certain third stage LPCR discs, P/N 3072397–1 or 3075192–1, installed.'' Because we are making these

corrections, this supplemental NPRM reopens the comment period.

As we stated in the original proposed AD, we received a report of cracks found during an FPI of the disc bore. This condition, if not corrected, could result in an uncontained failure of a second stage LPCR disc and/or third stage LPCR disc due to cracks in the bore, which could result in damage to the airplane.

FAA's Determination and Requirements of the Proposed AD

We have evaluated all pertinent information and identified an unsafe condition that is likely to exist or develop on other products of this same type design. We are proposing this AD, which would require removing from service engines with second stage LPCR discs and/or third stage LPCR discs that have a S/N:

• In Table 5 of ASBs TFE731–72–A3748, dated August 21, 2008, or TFE731–72–A3749, dated August 21, 2008, within 100 cycles-in-service (CIS) after the effective date of this proposed AD, and

• In Table 6 of ASBs TFE731–72–A3748, dated August 21, 2008, or TFE731–72–A3749, dated August 21, 2008, within 2,000 CIS or the next access after the effective date of this proposed AD, whichever occurs first.

The proposed AD would require you to use the service information described previously to perform these actions.

Costs of Compliance

We estimate that this supplemental proposed AD would affect 27 engines installed on airplanes of U.S. registry. We also estimate that it would take about 4 work-hours per engine to perform the proposed actions during scheduled maintenance and 140 work-hours per engine for the proposed actions during unscheduled maintenance. The average labor rate is $80 per work-hour. Required parts would cost about $31,000 per engine. Based on these figures, we estimate the total cost of the proposed AD to U.S. operators to be $900,000.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, ''General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

1. Is not a ''significant regulatory action'' under Executive Order 12866;

2. Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

3. Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD. *See* the **ADDRESSES** section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Under the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Honeywell International Inc. (Formerly AlliedSignal Inc., formerly Garrett Turbine Engine Company): Docket No. FAA–2009–0331; Directorate Identifier 2008–NE–40–AD.

Comments Due Date

(a) The Federal Aviation Administration (FAA) must receive comments on this airworthiness directive (AD) action by February 9, 2010.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Honeywell International Inc. TFE731–2, TFE731–2A, TFE731–2C, TFE731–3, TFE731–3A, TFE731–3AR, TFE731–3B, TFE731–3BR, TFE731–3C, TFE731–3CR, TFE731–3D, TFE731–3DR, TFE731–3R, TFE731–4, TFE731–4R, TFE731–5, TFE731–5AR, TFE731–5BR, and TFE731–5R series turbofan engines with certain second stage low-pressure compressor rotor (LPCR) discs, part number (P/N) 3072396–1 or 3075190–1, and/or certain third stage LPCR discs, P/N 3072397–1 or 3075192–1, installed. These engines are installed on, but not limited to, the airplanes listed in Table 1 of this AD.

TABLE 1—INSTALLED ON AIRPLANES BY MANUFACTURER

Manufacturer	Model
Dassault-Aviation or Dassault Aviation	Falcon 10 (Falcon 100) and Mystere-Falcon 20, 50, 900 and MF900 series.
Cessna Aircraft Company	Model 650, Citation III, VI, and VII.
Gulfstream Aerospace LP	1125 Westwind Astra.
Israel Aircraft Industries	1124 and 1124A (Westwind).
Learjet Inc	31, 31A, 35, 35A, 36, 36A, 55, 55B, 55C, and M31.
Lockheed Martin Corporation (formerly Lockheed-Georgia).	1329–23A, 1329–23D, 1329–23E, and 1329–25.
Raytheon Corporate Jets (formerly British Aerospace and Hawker Beechcraft Corporation).	DH.125 Series 1A, 3A, and 3A/RA, HS.125 Series F3B and F3B/RA, BH.125 and DH.125 Series 400A, HS.125 Series 403B, F400B, and F403B, HS.125 Series 600A, BH.125 Series 600A, HS.125 Series F600B, 700A, and 700B, BAe.125 Series 800 and 1000, and Hawker 800 and 850XP series.

Unsafe Condition

(d) This AD results from a report of cracks found during a fluorescent penetrant inspection (FPI) of the disc bore. We are issuing this AD to prevent an uncontained failure of a second stage LPCR disc and/or a third stage LPCR disc due to cracks in the bore, which could result in damage to the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Removing LPCR Discs From Service

(f) For engines with any of the serial number (S/N) LPCR discs listed in Table 5 of Honeywell International Inc. Alert Service Bulletins (ASBs) TFE731–72–A3748, dated August 21, 2008, and/or Table 5 of TFE731–72–A3749, dated August 21, 2008, remove those LPCR discs from service within 100 cycles-in-service (CIS) after the effective date of this AD.

(g) For engines with any of the S/N LPCR discs listed in Table 6 of Honeywell International Inc. ASBs TFE731–72–A3748, dated August 21, 2008, and or Table 6 of TFE731–72–A3749, dated August 21, 2008, do the earlier of the following:

(1) Remove the LPCR disc from service within 2,000 CIS after the effective date of this AD, or

(2) Remove the LPCR disc from service the next time the intermediate case is removed from the low-pressure compressor case.

Installation Prohibition

(h) After the effective date of this AD, do not install any of the S/Ns of LPCR discs listed in Table 5 of Honeywell International Inc. ASBs TFE731–72–A3748, dated August 21, 2008, and the discs listed in Table 5 of TFE731–72–A3749, dated August 21, 2008, into any engine. Also, do not install any of the S/Ns of LPCR discs listed in Table 6 of Honeywell International Inc. ASBs TFE731–72–A3748, dated August 21, 2008, and the discs listed in Table 6 of TFE731–72–A3749, dated August 21, 2008, into any engine.

Alternative Methods of Compliance

(i) The Manager, Los Angeles Aircraft Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Related Information

(j) Contact Joseph Costa, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712–4137; e-mail: *joseph.costa@faa.gov;* telephone: (562) 627–5246; fax: (562) 627–5210, for more information about this AD.

Issued in Burlington, Massachusetts, on December 4, 2009.

Peter A. White,

Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. E9–29482 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2009–1166; Directorate Identifier 2009–NM–107–AD]

RIN 2120–AA64

Airworthiness Directives; Airbus Model A300 B2–1C, B2K–3C, B2–203, B4–2C, B4–103, and B4–203 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for the products listed above. This proposed AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as: One operator reported loss of both pitch trims following autopilot disengagement after take off. Subsequent shop findings revealed severe damage to the power gears. Mal-phasing between the hydraulic motors was suspected to have induced excessive loads into the gear train, leading to collapse of one bearing on a shaft of the main gear, causing severe tooth damage. The combination of tooth damage and gear tilting caused the disconnection of two of the three hydraulic motors, resulting in jamming of the THSA [Trimmable Horizontal Stabilizer Actuator] gearbox and consequent loss of THSA control. This condition, if not detected and corrected, could lead to further cases of mal-phasing of the hydraulic motors of the THSA, causing degradation of the power gears and potentially resulting in reduced control of the aeroplane. The proposed AD would require actions that are intended to address the unsafe condition described in the MCAI.

DATES: We must receive comments on this proposed AD by January 25, 2010.

ADDRESSES: You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov*. Follow the instructions for submitting comments.
- *Fax:* (202) 493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–40, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Airbus SAS–EAW (Airworthiness Office), 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; e-mail: *account.airworth-eas@airbus.com*; Internet *http://www.airbus.com*.

You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425–227–1221 or 425–227–1152.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov;* or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647–5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Dan Rodina, Aerospace Engineer, International Branch, ANM–116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057–3356; telephone (425) 227–2125; fax (425) 227–1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include ''Docket No. FAA–2009–1166; Directorate Identifier 2009–NM–107–AD'' at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We have lengthened the 30-day comment period for proposed ADs that address MCAI originated by aviation authorities of other countries to provide adequate time for interested parties to submit comments. The comment period for these proposed ADs is now typically 45 days, which is consistent with the

comment period for domestic transport ADs.

We will post all comments we receive, without change, to *http://www.regulations.gov,* including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2009–0111, dated May 13, 2009 (referred to after this as ''the MCAI''), to correct an unsafe condition for the specified products. The MCAI states:

> One operator reported loss of both pitch trims following autopilot disengagement after take off. Subsequent shop findings revealed severe damage to the power gears. Mal-phasing between the hydraulic motors was suspected to have induced excessive loads into the gear train, leading to collapse of one bearing on a shaft of the main gear, causing severe tooth damage. The combination of tooth damage and gear tilting caused the disconnection of two of the three hydraulic motors, resulting in jamming of the THSA [Trimmable Horizontal Stabilizer Actuator] gearbox and consequent loss of THSA control.
>
> This condition, if not detected and corrected, could lead to further cases of mal-phasing of the hydraulic motors of the THSA, causing degradation of the power gears and potentially resulting in reduced control of the aeroplane.
>
> For the reasons described above, this AD requires repetitive checks [on-airplane phasing inspections and magnetic plug inspections for metal particles on the drain plug using detail inspection methods] of the THSA and corrective actions [replacement of the THSA with a serviceable unit], depending on findings.

You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

Airbus has issued Mandatory Service Bulletin A300–27–0201, including Appendices 1, 2, and 3, dated March 9, 2009. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Explanation of Proposed Return of Parts to the Manufacturer

Paragraph (f)(4) of this NPRM specifies to return certain THSA units to the manufacturer. These parts must be returned to the manufacturer so that it can investigate the root cause of the identified unsafe condition. In addition, for certain findings, only the manufacturer can repair/overhaul the unit.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have proposed different actions in this AD from those in the MCAI in order to follow FAA policies. Any such differences are highlighted in a Note within the proposed AD.

Costs of Compliance

Based on the service information, we estimate that this proposed AD would affect about 12 products of U.S. registry. We also estimate that it would take about 5 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is $80 per work-hour. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be $4,800, or $400 per product.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. ''Subtitle VII: Aviation Programs,'' describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in ''Subtitle VII, Part A, Subpart III, Section 44701: General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a ''significant regulatory action'' under Executive Order 12866;

2. Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:

Airbus: Docket No. FAA–2009–1166; Directorate Identifier 2009–NM–107–AD.

Comments Due Date

(a) We must receive comments by January 25, 2010.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Airbus Model A300 B2–1C, B2K–3C, B2–203, B4–2C, B4–103,

and B4–203 airplanes, certificated in any category, all serial numbers.

Subject

(d) Air Transport Association (ATA) of America Code 27: Flight Controls.

Reason

(e) The mandatory continuing airworthiness information (MCAI) states:

One operator reported loss of both pitch trims following autopilot disengagement after take off. Subsequent shop findings revealed severe damage to the power gears. Mal-phasing between the hydraulic motors was suspected to have induced excessive loads into the gear train, leading to collapse of one bearing on a shaft of the main gear, causing severe tooth damage. The combination of tooth damage and gear tilting caused the disconnection of two of the three hydraulic motors, resulting in jamming of the THSA [Trimmable Horizontal Stabilizer Actuator] gearbox and consequent loss of THSA control.

This condition, if not detected and corrected, could lead to further cases of mal-phasing of the hydraulic motors of the THSA, causing degradation of the power gears and potentially resulting in reduced control of the aeroplane.

For the reasons described above, this AD requires repetitive checks [on-airplane phasing inspections and magnetic plug inspections for metal particles on the drain plug using detail inspection methods] of the THSA and corrective actions [replacement of the THSA with a serviceable unit], depending on findings.

Actions and Compliance

(f) Unless already done, do the following actions.

(1) Within 4,000 flight hours after the last THSA overhaul or within 250 flight hours after the effective date of this AD, whichever occurs later: Perform an on-airplane phasing inspection of the THSA, and a magnetic plug inspection for metal particles on the drain plug of the THSA, using detailed inspection methods, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A300–27–0201, dated March 9, 2009.

(i) If the THSA passes the phasing inspection, but the magnetic plug inspection reveals metal particles that are equal to or less than 1.5 mm (0.059 in.) × 0.5 mm (0.0196 in.), and the depth of the particle layer does not exceed 1 mm (0.0393 in.), repeat the inspections thereafter at intervals not to exceed 2,500 flight hours in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A300–27–0201, dated March 9, 2009.

(ii) If the THSA passes the phasing inspection, but the magnetic plug inspection reveals metal particles with dimensions greater than 1.5 mm (0.059 in.) × 0.5 mm (0.0196 in.), or a layer of particles with a depth greater than 1 mm (0.0393 in.) is found, before further flight, replace the THSA with a serviceable unit, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A300–27–0201, dated March 9, 2009.

(iii) If the THSA fails the phasing inspection and the magnetic plug inspection reveals metal particles that are equal to or less than 1.5 mm (0.059 in.) × 0.5 mm (0.0196 in.), and the depth of the particle layer does not exceed 1 mm (0.0393 in.), within 500 flight hours after the inspection, replace the THSA with a serviceable unit, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A300–27–0201, dated March 9, 2009.

(iv) If the THSA fails the phasing inspection and the magnetic plug inspection reveals metal particles with dimensions greater than 1.5 mm (0.059 in.) × 0.5 mm (0.0196 in.), or a layer of particles with a depth greater than 1 mm (0.0393 in.) is found, before further flight, replace the THSA with a serviceable unit, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A300–27–0201, dated March 9, 2009.

Note 1: For the purposes of this AD, a detailed inspection is: ''An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as a mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required.''

Note 2: A ''serviceable'' THSA is one that has a correct hydraulic motor phasing and no particles or few particles with maximum dimensions of 1.5 mm (0.059 in.) × 0.5 mm (0.0196 in.) and a layer of particles with a maximum depth of 1 mm (0.0393 in.) found on the magnetic plug.

(2) Within 2,500 flight hours after replacing any THSA, perform a phasing inspection of the THSA, and a magnetic plug inspection for metal particles on the drain plug of the THSA, as specified in paragraph (f)(1) of this AD. Replacing the THSA, as required by paragraphs (f)(1)(ii), (f)(1)(iii), and (f)(1)(iv) of this AD, as applicable, does not constitute terminating action for the repetitive inspections as required by paragraph (f)(1)(i) of this AD.

(3) As of the effective date of this AD, do not install a replacement THSA on any airplane, unless it has been inspected in accordance with the requirements of paragraphs (f)(1)(i) through (f)(1)(iv) as applicable, of this AD.

(4) Within 3 weeks after removal of a THSA unit from an airplane, send it to the THSA manufacturer, Goodrich Actuation Systems, Stafford Road Fordhouses, Wolverhampton, West Midlands WV10 7EH, England.

(5) Submit a report of the findings (both positive and negative) of the inspections required by paragraph (f)(1) of this AD to the Manager, Airbus Customer Service Directorate, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex France; telephone +33 5 61 93 33 33; telex AIRBU 530526F; fax +33 5 61 93 42 51; at the applicable time specified in paragraph (f)(5)(i) or (f)(5)(ii) of this AD. The report must include the inspection results (including no findings), and replacement or actions to be done.

(i) For any inspection done on or after the effective date of this AD: Submit the report within 30 days after the inspection.

(ii) For any inspection done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

FAA AD Differences

Note 3: This AD differs from the MCAI and/or service information as follows: No differences.

Other FAA AD Provisions

(g) The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, International Branch, ANM–116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Dan Rodina, Aerospace Engineer, International Branch, ANM–116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057–3356; telephone (425) 227–2125; fax (425) 227–1149. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(2) *Airworthy Product:* For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) *Reporting Requirements:* For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120–0056.

Related Information

(h) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2009–0111, dated May 13, 2009; and Airbus Mandatory Service Bulletin A300–27–0201, including Appendices 1, 2, and 3, dated March 9, 2009; for related information.

Issued in Renton, WA, on December 3, 2009.

Michael Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E9–29575 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Part 4

[Docket No. FDA–2008–N–0424]

RIN 0910–AF82

Postmarketing Safety Reporting for Combination Products; Extension of Comment Period

AGENCY: Food and Drug Administration, HHS.

ACTION: Proposed rule; extension of comment period.

SUMMARY: The Food and Drug Administration (FDA) is extending to January 29, 2009, the comment period for the proposed rule that appeared in the **Federal Register** of October 1, 2009. In the proposed rule, FDA requested comments on postmarketing safety reporting requirements for combination products. The agency is taking this action in response to requests for an extension to allow interested persons additional time to submit comments.

DATES: The comment period for the proposed rule published October 1, 2009 (74 FR 50744), is extended. Submit written or electronic comments by January 29, 2010.

ADDRESSES: You may submit comments, identified by Docket No. FDA–2008–N–0424 and/or RIN number 0910–AF82, by any of the following methods:

Electronic Submissions

Submit electronic comments in the following way:

- Federal eRulemaking Portal: *http://www.regulations.gov*. Follow the instructions for submitting comments.

Written Submissions

Submit written submissions in the following ways:

- FAX: 301–827–6870.
- Mail/Hand delivery/Courier (for paper, disk, or CD–ROM submissions): Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852.

To ensure more timely processing of comments, FDA is no longer accepting comments submitted to the agency by e-mail. FDA encourages you to continue to submit electronic comments by using the Federal eRulemaking Portal, as described previously, in the **ADDRESSES** portion of this document under *Electronic Submissions*.

Instructions: All submissions received must include the agency name and docket number and Regulatory Information Number (RIN) for this rulemaking. All comments received may be posted without change to *http://www.regulations.gov*, including any personal information provided. For additional information on submitting comments, see the ''Comments'' heading of the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: For access to the docket to read background documents or comments received, go to *http://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852.

FOR FURTHER INFORMATION CONTACT: John Barlow Weiner, Office of Combination Products (HFG–3), Food and Drug Administration, 15800 Crabbs Branch Way, suite 200, Rockville, MD 20855, 301–427–1934.

SUPPLEMENTARY INFORMATION:

I. Background

In the **Federal Register** of October 1, 2009 (74 FR 50744), FDA published a proposed rule with a 90-day comment period to request comments on postmarketing safety reporting requirements for combination products. Comments on the proposed rule will inform FDA's rulemaking to establish regulations for postmarketing safety reporting for combination products.

The agency has received requests for a 30-day extension of the comment period for the proposed rule. Each request conveyed concern that the current 90-day comment period does not allow sufficient time to develop a meaningful or thoughtful response to the proposed rule.

FDA has considered the requests and is extending the comment period for the proposed rule for 30 days, until January 29, 2010. The agency believes that a 30-day extension allows adequate time for interested persons to submit comments without significantly delaying rulemaking on these important issues.

II. Request for Comments

Interested persons may submit to the Division of Dockets Management (see **ADDRESSES**) written or electronic comments on this document. Submit a single copy of electronic comments or two paper copies of any mailed comments, except that individuals may submit one paper copy. Comments are to be identified with the docket number found in brackets in the heading of this document. Received comments may be seen in the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

Dated: December 7, 2009.

David Horowitz,

Assistant Commissioner for Policy.

[FR Doc. E9–29493 Filed 12–10–09; 8:45 am]

BILLING CODE 4160–01–S

DEPARTMENT OF VETERANS AFFAIRS

38 CFR Part 3

RIN 2900–AN46

Notice of Information and Evidence Necessary To Substantiate Claim

AGENCY: Department of Veterans Affairs.

ACTION: Proposed rule.

SUMMARY: The Department of Veterans Affairs (VA) proposes to amend its regulations regarding VA's duty to notify a claimant of the information and evidence necessary to substantiate a claim. The purpose of this amendment is to implement the Veterans' Benefits Improvement Act of 2008, which requires the Secretary of Veterans Affairs to prescribe in regulations requirements relating to the content of notice to be provided to claimants for veterans benefits, including different content for notice based on the type of claim filed, the type of benefits or services sought under the claim, and the general information and evidence required to substantiate the basic elements of each type of claim.

DATES: Comments must be received by VA on or before February 9, 2010.

ADDRESSES: Written comments may be submitted through *www.Regulations.gov;* by mail or hand-delivery to Director, Regulations Management (02REG), Department of Veterans Affairs, 810 Vermont Ave., NW., Room 1068, Washington, DC 20420; or by fax to (202) 273–9026. (This is not a toll free number). Comments should indicate that they are submitted in response to ''RIN 2900–AN46—Notice of Information and Evidence to Substantiate Claim.'' Copies of comments received will be available for public inspection in the Office of Regulation Policy and Management, Room 1063B, between the hours of 8 a.m. and 4:30 p.m., Monday through Friday (except holidays). Please call (202) 461–4902 for an appointment. (This is not a toll free number). In addition, during the comment period, comments may be viewed online through the Federal Docket Management System (FDMS) at *http://www.Regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Thomas J. Kniffen, Chief, Regulations

Staff (211D), Compensation and Pension Service, Veterans Benefits Administration, Department of Veterans Affairs, 810 Vermont Avenue, NW., Washington, DC 20420, (202) 461–9725. (This is not a toll-free number.)

SUPPLEMENTARY INFORMATION: This proposed rule is necessary to implement the Veterans' Benefits Improvement Act of 2008, Public Law 110–389, 122 Stat. 4145, 4147. Section 101(a)(1) of the Act redesignated former 38 U.S.C. 5103(a) as 38 U.S.C. 5103(a)(1) but made no change to its language. 122 Stat. 4147. Section 5103(a)(1) continues to require VA to notify a claimant for veterans benefits of the information and evidence not previously provided to the Department that is necessary to substantiate a claim and of the respective responsibilities of VA and the claimant in obtaining various portions of the evidence. The United States Court of Appeals for the Federal Circuit (Federal Circuit) has held that section 5103(a)(1) ''on its face does not address the level of required detail'' in the notice provided and ''must be interpreted as requiring only generic notice at the outset.'' *Wilson* v. *Mansfield,* 506 F.3d 1055, 1059–60 (Fed. Cir. 2007). The Federal Circuit explained that ''generic notice'', refers to notice that ''identif[ies] the information and evidence necessary to substantiate the particular type of claim being asserted'' by a claimant. *Id.* In *Angel Vazquez-Flores* v. *Eric K. Shinseki, Secretary of Veterans Affairs,* and *Michael R. Schultz* v. *Eric K. Shinseki, Secretary of Veterans Affairs,* Nos. 2008–7150 & 2008–7115, 2009 WL 2835434, *6 (Fed. Cir. Sept. 4, 2009), the Federal Circuit stated that the term ''particular type of claim'' refers to the type of claim filed, *e.g.,* claim for service connection or an increased rating. *See also Wilson,* 506 F.3d at 1059–60; *Paralyzed Veterans of Am.* v. *Secretary of Veterans Affairs,* 345 F.3d 1334, 1347 (Fed. Cir. 2003).

Section 101(a)(2) of Public Law 110–389 amends 38 U.S.C. 5103(a) by adding subsection (a)(2), requiring the Secretary of Veterans Affairs to prescribe in regulations requirements relating to the content of notice to be provided under section 5103(a). VA's regulations must specify ''different contents'' for notice based on the type of claim filed (*e.g.,* original claims, reopened claims, claims for increase), must provide that the contents of the notice be appropriate to the type of benefits or services sought under the claim, and must specify the ''general information and evidence required to substantiate the basic elements'' of each type of claim. Public Law 110–389, 122 Stat. 4147. Section 101(b) of Public Law 110–389, 112 Stat. 4147, specifies that the regulations will apply to notice provided to claimants on or after the effective date of such regulations. However, the statute does not specify the types of ''information and evidence'' that would be required for any type of claim, nor does it limit VA's authority to determine what types of information and evidence are necessary for that purpose.

VA is proposing to amend current 38 CFR 3.159 so that it would pertain only to VA's duty to notify a claimant upon receipt of an application for veterans benefits, as required by 38 U.S.C. 5102 and 5103. Therefore, § 3.159(a)(1) and (2), (c), (d), (e), (f), and (g), which pertain to VA's duty to assist in developing claims under 38 U.S.C. 5103A, rather that the duty to notify under section 5103, would be redesignated as new § 3.167(a) through (e). We have made one substantive amendment to current § 3.159(d)(3) which will be redesignated as new § 3.167(c)(1). We are eliminating lack of veteran status as a basis upon which VA will refrain from or discontinue assistance under section 5103A in new section 3.167(c)(1) because the United States Court of Appeals for Veterans Claims (Veterans Court) held in *Gardner* v. *Shinseki,* 22 Vet. App. 415, 421 (2009), that VA has a duty to assist a person who files a claim for veterans benefits alleging that he or she is a veteran even if the person has not demonstrated veteran status.

VA provides the following assistance to develop a claimant's status as a veteran. Sections III through V of VA Form 21–526, Veteran's Application for Compensation and/or Pension, ask a veteran to provide information about his or her military service and to attach an original or certified copy of the claimant's DD214, Certification of Release or Discharge from Active Duty. As part of the initial screening process, VA conducts a routine check of the application and accompanying documents to determine whether the claimant has provided sufficient information to verify the character of discharge from military service and the claimed service. If the information provided is not sufficient to verify the claimed service or to establish the claimant's status as a ''veteran,'' VA assists the claimant by requesting military records and other relevant records, as explained in § 3.167(b)(1)–(3) of this rulemaking, which is a recodification of current § 3.159(c)(1)–(3). VA discontinues its assistance if the Department determines that the claimant's service does not satisfy the requirements of title 38, United States Code, or the claimant does not submit essential information missing from the application that VA has requested. Also, VA will not provide assistance if no reasonable possibility exists that such assistance would aid in substantiating the claimant's status as a veteran, *e.g.,* the claimant's DD214 shows that the claimant received a dishonorable discharge from service.

Current § 3.159(a)(4) defines ''event'' for purposes of current § 3.159(c)(4)(ii), which pertains to VA's duty to assist. However, the term is also relevant with regard to the notice VA must provide regarding the elements necessary to substantiate a claim for service connection. We are therefore retaining the definition without substantive amendment as new § 3.159(a)(5) and also redesignating it without substantive amendment as proposed new § 3.167(a)(3).

In addition to current § 3.159(a)(4), VA would retain in amended § 3.159 another definition in current § 3.159(a) that pertains to VA's duty to notify. The current definition of ''[s]ubstantially complete application'' in § 3.159(a)(3) would be redesignated in new § 3.159(a)(1) and we would additionally define the term to include an application ''identifying'' pertinent information. Proposed new § 3.159(a)(2) would define ''[T]ype of claim filed'' to mean ''an original claim, claim to reopen a prior final decision on a claim, or a claim for increase in benefits.'' This regulatory definition incorporates 38 U.S.C. 5103(a)(2)(B)(i) identifying ''an original claim, claim for reopening a prior decision on a claim, [and] a claim for an increase in benefits'' as the three types of claims for which VA must specify different contents.

VA would state in § 3.159(a)(3) that ''[t]ype of benefit sought'' refers to ''the general nature of the benefits sought, such as disability compensation, increased compensation, dependency and indemnity compensation, and pension.'' The definition would not include ''specific disabilities, theories of entitlement, or other case-specific facts.'' Section 5103(a)(1) itself makes clear that the requisite notice must be provided soon after VA receives the complete or substantially complete application. At the juncture in the claims process at which VA must comply with 38 U.S.C. 5103(a)(1), VA is unable to provide notice that accounts for specific disabilities, theories of entitlement, or particular facts. VA solicits case-specific information and evidence by sending development letters to claimants as part of the Department's duty to assist in obtaining

evidence to substantiate claims as required by 38 U.S.C. 5103A.

VA would redesignate without change the definition of ''[i]nformation'' in current § 3.159(a)(5) as proposed new § 3.159(a)(4).

VA would redesignate without substantive amendment current § 3.159(f) as proposed new § 3.159(b), which would state that, for purposes of the notice requirements in §§ 3.159 through 3.166, notice to the claimant means notice to the claimant or his or her fiduciary, if any, as well as to his or her representative, if any.

VA would redesignate without amendment current § 3.159(b)(2) as proposed new § 3.159(c), describing the notice that VA would provide upon receipt of an incomplete application.

Proposed new § 3.159(d) would address the notice VA would provide upon receipt of a complete or substantially complete application, as required by 38 U.S.C. 5103(a)(1). Proposed new § 3.159(d)(1) describes the purpose of the notice required by 38 U.S.C. 5103(a)(1). Consistent with the plain language of 38 U.S.C. 5103(a)(1), which is unchanged by Public Law 110–389 and section 101(a)(2) of the Act, § 3.159(d)(1) would explain that, upon receipt of a complete or substantially complete application, VA ''will provide a claimant with notice of the general information and types of evidence that could be used by VA in deciding the type of claim filed for the type of benefit sought.'' The first and second sentences of this paragraph would generally restate 38 U.S.C. 5103(a)(2)(B)(ii) and (iii).

The third sentence of proposed § 3.159(d)(1) would state that ''VA generally will not * * * identify specific evidence necessary to substantiate an individual claimant's case.'' As the Federal Circuit explained in *Vazquez-Flores*, 38 U.S.C. 5103(a)(1) does not require veteran-specific notice. 2009 WL 2835434, *6; *see also Wilson*, 506 F.3d at 1059–60. In addition, because VA provides notice under section 5103(a) at an early stage in the claim, VA can provide notice of the general types of evidence that would be needed to substantiate the claim for the type of benefit sought, but generally cannot at that stage identify specific items of evidence that may prove necessary in each individual case once the facts and arguments have been developed pursuant to VA's duty to assist. Further, any attempt to identify specific items of evidence would not only be potentially speculative, but would often require highly detailed and complex notice to account for the variety of facts and arguments that may be raised as the claim is developed.

The report of the Senate Veterans' Affairs Committee on S. 3023, which was enacted as Public Law 110–389, noted that IBM Global Business Services found ''the current [VA notice] letter to be 'long and complex, containing a great deal of legal language that can be confusing to veterans when trying to understand the process for completing their disability claim.' '' S. Rep. 110–449, at 8–9 (2008). IBM recommended that VA revise the notice letter ''to be shorter and more transparent,'' a conclusion that the Senate committee appeared to endorse. *Id.* at 9–10. VA formed a work group and, consistent with the recommendations, VA revised notice letters provided to claimants for compensation, pension, and death benefits to make the letters shorter and more specific. We believe that VA notice will be more easily read and understood by claimants if VA provides short, succinct notice about the information and evidence necessary to substantiate the type of claim filed and benefit sought at the initial stages of a claim and defers case-specific letters to the development stage of the claim. *Id.* at 78 (letter from Secretary of Veterans Affairs James B. Peake, M.D., dated July 8, 2008). VA currently receives more than 800,000 claims annually, most of which require VA to provide section 5103(a)(1) notice. *Id.* By providing generic rather than case-specific notice, the Department is able to respond quickly to a claimant's application for benefits, thereby commencing the claims-adjudication process. *Id.* Case-specific notice, by contrast, is not administratively feasible and would only delay the process without appreciably furthering development of the information and evidence necessary to substantiate the claim.

Consistent with proposed new § 3.159(d)(1), we would explain in the proposed new § 3.159(d)(2)(i) that VA will notify a claimant of the general type of information and evidence that is necessary to substantiate entitlement for the type of veterans benefits for which a claim was filed. *Vazquez-Flores*, 2009 WL 2835434, *6; *Wilson*, 506 F.3d at 1058–60.

Proposed new § 3.159(d)(2)(ii) and (iii) would explain how VA's notice will delineate the parties' respective obligations under 38 U.S.C. 5103(a)(1) to obtain the information or evidence necessary to substantiate a claim. As set forth in § 3.159(d)(2)(ii), VA will notify a claimant that VA will obtain records that a claimant adequately identifies and authorizes VA to obtain from any Federal agency or from any other entity or person and will provide a medical examination or obtain a medical opinion if necessary to decide the claim.

Proposed new § 3.159(d)(2)(i)(A) and (B) would state that VA will notify a claimant of the claimant's obligation to provide VA with enough information to identify and locate the records, including the person or entity holding the records, the approximate time frame covered by the records, and, in the case of medical-treatment records, the condition for which treatment was provided and, if necessary, to authorize the release to VA of existing records in a form acceptable to the person or entity holding the records.

Proposed new § 3.159(d)(3) would explain the circumstances under which VA will not provide notice under 38 U.S.C. 5301(a)(1). This is a restatement of current § 3.159(b)(3), with one additional circumstance. In proposed new § 3.159(d)(3)(i), we would state that VA will not provide notice if the claim can be granted when the initial application is filed. In such cases, there is no need to delay award of the benefit by issuing notice and waiting at least 30 days for a response from the claimant because VA already has the information and evidence necessary to grant the claim.

Proposed new § 3.159(d)(4) would provide the time period within which a claimant must provide the information and evidence requested by VA. Proposed new § 3.159(d)(4)(i) and (ii) would redesignate the last three sentences of current § 3.159(b)(1).

We propose to redesignate current §§ 3.160 and 3.161 as §§ 3.170 and 3.171 respectively.

Proposed new § 3.160 would provide the content of the notice that VA will provide upon receipt of an original claim for disability compensation. Paragraph (a)(1) would explain that, if a veteran alleges disability resulting from active duty, VA will notify the veteran that information and evidence of the following is necessary to substantiate the claim: (1) A current disability, which is established by medical treatment records, medical opinions, and evidence from non-medical persons about persistent and recurrent symptoms of disability they have observed; (2) inservice incurrence or aggravation of an injury or disease, symptoms that were noted during service and that persisted until diagnosis of an injury or disease causing the symptoms, or an event in service capable of causing injury or disease, which is established by medical treatment records, medical opinions, and, in the case of certain symptoms or inservice events, evidence from non-

medical persons; and (3) a relationship between the inservice disease, injury, symptoms, or event and the veteran's current disability, which is generally established by medical treatment records, medical opinions, or by use of a legal presumption that the disability is related to a particular type of military service, such as detention as a prisoner of war, participation in a radiation-risk activity, or service in Vietnam or the Southwest Asia theater of operations during the Gulf War. Subsection (a)(1) would also explain that information and evidence must show the extent of current disability, which may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the disability affects the veteran's ability to work and from other people about how the veteran's symptoms affect the veteran.

VA would not provide notice of the information and evidence necessary to establish the claimant's status as a veteran. VA Form 21–526, Veteran's Application for Compensation and/or Pension, solicits from a veteran information that enables VA to verify the veteran's service and character of discharge, and, under its duty to assist with claim development, VA requests the records necessary to verify the veteran's service and character of discharge from the military service departments. '' 'Service department findings are binding on VA for purposes of establishing service in the U.S. Armed Forces.' '' *Spencer* v. *West*, 13 Vet. App. 376, 380 (2000) (quoting *Duro* v. *Derwinski*, 2 Vet. App. 530, 532 (1992)); 38 CFR 3.203. Therefore, in most cases, there is no need to notify a claimant of the information and evidence necessary to substantiate veteran status and VA instead tailors the notice provided to the type of benefit sought.

VA also would not provide notice regarding the information and evidence necessary to substantiate an effective date for an award of benefits. We recognize that the Veterans Court has held that VA must provide notice under 38 U.S.C. 5103(a)(1) as to all elements of a claim, including ''downstream elements'' such as establishing entitlement to an effective date. *Dingess* v. *Nicholson*, 19 Vet. App. 473, 484 (2006), *aff'd per curiam,* Nos. 2006–7247 & 2006–7312, 2007 WL 1686737 (Fed. Cir. June 5, 2007). However, we believe that, at the initial stage of a claim when section 5103(a)(1) notice must be provided, notice of the information and evidence necessary to establish an effective date for an award of benefits ''may be misleading and confusing'' to the claimant. S. Rep. 110–449, at 10. For example, it may lead the claimant to assume that service connection has been conceded and that the issue on which evidence must be submitted relates to the effective date. *Id.*

Further, there is generally no need to notify claimants of the need to submit evidence relating to the effective dates of VA awards. The determination of an effective date of an award is governed by statute and there generally is no evidence that a claimant can submit to substantiate a particular effective date. Pursuant to 38 U.S.C. 5110, the effective date of an award in most circumstances is based upon the date of the claim for benefits, the date of separation from service, the date of a veteran's death, or the date a disability arose or worsened. The date of the claim will be a matter of record before VA sends notice under section 5103(a)(1). The other events upon which an effective date may be based generally will be established by the same evidence that VA obtains or requests the claimant to submit for purposes of establishing entitlement to the benefit sought. As noted above, VA routinely obtains verification of service from the service department, as needed, upon receipt of a complete application providing the necessary information. Further, at the time VA grants disability or death benefits and the issue of effective date therefore arises, VA will necessarily have obtained, pursuant to its notice under section 5103(a)(1) and its duty to assist under section 5103A, evidence documenting the date of the veteran's death (in death benefit claims) or medical evidence concerning the diagnosis, treatment, and history of the veteran's disability (in disability benefit cases). There will seldom be circumstances where additional evidence would be relevant with respect to the issue of effective date. However, in the event that additional evidence would be relevant at the stage of proceedings in which VA assigns an effective date, it may be addressed in the notices relevant to that stage of proceedings, including notices of decisions and statements of the case.

As explained in § 3.160(a)(2), VA will notify a claimant who files a claim alleging disability based on active duty for training that information and evidence of the following is necessary to show service connection for the disability: (1) A current disability, which is established by medical treatment records, medical opinions, and evidence from non-medical persons about persistent and recurrent symptoms of disability they have observed; (2) disability during active duty for training from a disease or injury that was incurred or aggravated in line of duty, symptoms that were noted during active duty for training and that persisted until diagnosis of an injury or disease causing the symptoms, or an event during such training capable of causing injury or disease, which is generally established by medical treatment records, medical opinions and competent non-medical evidence based on personal observations; and (3) a relationship between the current disability and the disability suffered during active duty for training, which is generally established by medical treatment records or medical opinions. Subsection (a)(2) would also explain that the information and evidence must show the extent of the claimant's current disability, which may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the disability affects the claimant's ability to work and from other people about how the claimant's symptoms affect the claimant.

Section 3.160(a)(3) would state that VA will notify a claimant who files a claim based on inactive duty training that the following information and evidence is necessary to substantiate the claim: (1) A current disability, which is established by medical treatment records, medical opinions, and evidence from non-medical persons about persistent and recurrent symptoms of disability they have observed; (2) disability during inactive duty training from an injury that was incurred or aggravated during such training or an acute myocardial infarction, cardiac arrest, or cerebrovascular accident during such training, which is generally established by medical treatment records or medical opinions; and (3) a relationship between the claimant's current disability and the disability suffered during inactive duty training. Subsection (a)(3) would also explain that the information and evidence must show the extent of current disability, which may be based on medical treatment records, medical opinions, statements from the claimant's employer about how the disability affects the claimant's ability to work and from other people about how the claimant's symptoms affect the claimant.

Section 3.160(b) would explain that, if a veteran files a claim alleging disability caused or aggravated by a service-connected disability, VA will notify the veteran that information and evidence of the following is necessary to substantiate the claim: (1) The veteran has a disability in addition to the service-connected disability, which is established by medical treatment

records, medical opinions, and evidence from non-medical persons about persistent and recurrent symptoms of disability they have observed; (2) a relationship between the additional disability and a service-connected disability, which is generally established by medical treatment records and medical opinions; and (3) the extent of current disability, which may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the disability affects the veteran's ability to work and from other people about how the veteran's symptoms affect the veteran.

Section 3.160(c) would describe the notice that VA will provide upon receipt of an application for disability caused by VA treatment, vocational rehabilitation, or compensated work therapy. Section 3.160(c) would explain that VA will notify the veteran that information and evidence of the following is necessary to substantiate the claim: (1) An additional physical or mental disability or an aggravation of an existing injury or disease, which is established by medical treatment records, medical opinions, and evidence from non-medical persons about persistent and recurrent symptoms of disability they have observed; (2) the veteran's additional disability or aggravation of an existing injury or disease was caused by VA hospital care, medical or surgical treatment or examination, VA training or rehabilitation services, or participation in VA's compensated work therapy program, which is generally established by medical treatment records and medical opinions; (3) the additional disability or aggravation caused by VA hospital care, medical or surgical treatment or examination was the direct result of VA fault (carelessness, negligence, lack of proper skill, or error in judgment) or was the direct result of an event not reasonably foreseeable (*i.e.,* not an ordinary risk of the services provided); and (4) the extent of current additional disability, which may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the disability affects the veteran's ability to work and from other people about how the veteran's symptoms affect the veteran.

Section 3.161 would explain the notice that VA will provide upon receipt of an application seeking increased disability compensation. Section 3.161(a) would state that VA will notify a claimant the following information and evidence is necessary to substantiate a claim for an increased schedular rating: (1) An increase in the extent of the claimant's service-connected disability, which is based on medical treatment records, medical opinions, and statements from non-medical persons about persistent and recurrent symptoms of disability they have observed; and (2) the extent of current disability, which may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the disability affects the veteran's ability to work and from other people about how the veteran's symptoms affect the veteran. VA will notify a claimant that VA will assign a rating for the disability from 0 to 100 percent under the VA Schedule for Rating Disabilities.

Consistent with proposed new § 3.159(d)(1), VA will not provide case-specific notice in increased-rating claims regarding the relevant rating criteria under diagnostic codes (DC) that are applicable to rating the current extent of a claimant's disability for the following reasons. First, as the Federal Circuit has explained, 38 U.S.C. 5103(a)(1) is satisfied by generic notice regarding an increased-rating claim rather than veteran-specific notice regarding the DCs applicable to a particular veteran's claim. *Vazquez-Flores,* 2009 WL 2835434, *6, *10; *Wilson,* 506 F.3d at 1059–60; *Paralyzed Veterans,* 345 F.3d at 1347. We note as well that section 101(a) of the Veterans' Benefits Improvement Act of 2008 retained section 5103(a) as subsection (a)(1) and made no amendment to the provision. Thus, the unamended text of 38 U.S.C. 5103(a)(1) does not require that VA provide case-specific notice of potentially applicable DCs.

Second, notifying the claimant to submit evidence that their disability has increased in severity generally will put the claimant on notice to submit or direct VA's attention to all evidence that potentially may bear upon the severity of the disability. Third, many provisions in VA's rating schedule necessarily contain detailed medical criteria that would not be useful to claimants. A notice conveying extensive and often technical regulatory criteria will likely be long and complex, containing a great deal of medical language that can be confusing for the average reader, thereby diminishing its usefulness. *See* S. Rep. 110–449, at 8–9. Generic notice, on the other hand, will be more readily understandable and useful to claimants. *Id.* at 78. Fourth, it is VA's policy to assign a rating under the DC that most closely reflects the features of the current disability as shown by the medical evidence. This may require consideration of several potentially applicable DCs containing different criteria. Providing notice of the criteria under a single DC, such as that previously used in a particular case, may be misleading and may dissuade claimants from submitting all evidence bearing upon the current severity of their disabilities. At the same time, a notice conveying the requirements of several potentially applicable DCs, many of which may ultimately prove inapplicable upon development of the claim, may be confusing the claimant and may create unrealistic expectations. Fifth, providing notice tailored to the specific DCs potentially applicable to each claim requires time-consuming review in each case by VA employees in order to identify potentially applicable DCs based on the facts previously of record. The time devoted to such review would divert resources from the development and adjudication of claims and, for the reasons stated above, generally would not make VA's notices more helpful to claimants. By providing generic notice, VA will be able to focus its resources on adjudicating the more than 800,000 claims filed annually. *Id.*

We recognize that the Senate Veterans' Affairs Committee report on Public Law 110–389 urges VA to codify in regulations the holding of *Vazquez-Flores* v. *Peake,* 22 Vet. App. 91 (2008), *vacated,* No. 2008–7150, 2009 WL 2835434 (Fed. Cir. Sept. 4, 2009), in which the Veterans Court held that 38 U.S.C. 5103(a)(1) requires VA to provide case-specific notice in increased-rating claims regarding the relevant DC criteria applicable to a claim. S. Rep. 110–449, at 11–12. However, VA believes, and the Federal Circuit concurs, that the Veterans Court's interpretation of section 5103(a)(1) does not accurately reflect the plain language of the statute and does not appropriately defer to VA's interpretation of the statute as reflected in former 38 CFR 3.159(b). *Vazquez-Flores,* 2009 WL 2835434, *6. In accordance with the provisions of Public Law 110–389 directing VA to prescribe regulations governing the content of VA notices under section 5103(a)(1), we propose to clarify our interpretation of the statute, consistent with the Federal Circuit's guidance in *Vazquez-Flores* and *Wilson.* With all due respect to the views expressed in the Committee report, such statements do not carry the force of law, particularly where they do not illuminate the meaning of the statutory terms, but merely express expectations that were not themselves reflected in the statute as passed. *See Strickland* v. *Commissioner, Maine Dep't of Human Servs.,* 48 F.3d 12, 19 (1st Cir. 1995). We

note that there was no mention of *Vazquez-Flores* during deliberations by the House of Representatives on Public Law 110–389. 154 Cong. Rec. H9387–H9405 (daily ed. Sept. 24, 2008). It is well established that expressions of expectations in isolated committee reports do not have the force of law, nor do they express the intent of Congress. *See Strickland,* 48 F.3d at 19 (declining to rely on legislative history comprised of ''one paragraph in one report of one of the two chambers that passed the law''); *Scalise v. Thornburgh,* 891 F.2d 640, 645 (7th Cir. 1989) (''An expression of an 'expectation' by one committee of the House * * * does not establish congressional intent''); *cf. Lincoln* v. *Vigil,* 508 U.S. 182, 193 (1993) (''Congress may always circumscribe agency discretion to allocate resources by putting restrictions in the operative statutes (though not * * * just in the legislative history).''). In addition, section 101(b) of Public Law 110–389 authorizes the Secretary of Veterans Affairs to prescribe regulations regarding the content of the notices that the Department will provide. The fact that Public Law 110–389 itself contains no language circumscribing in any way the Secretary's discretion to promulgate such regulations also leads us to conclude the ''expectation'' expressed in the Senate Committee report is not dispositive as to the notice that VA must provide upon receipt of a claim for an increased rating.

Section 3.161(b) explains the notice that VA would provide upon receipt of an application for a rating of total disability based on individual unemployability. The notice would state that the information and evidence generally must establish that a veteran is unable to secure and follow substantial gainful employment because of a service-connected disability rated at least 60 percent disabling or more than one service-connected disability with one disability rated at 40 percent or more and a combined rating of at least 70 percent, but that VA will consider all evidence showing that the veteran is unemployable even if these ratings are not met. This determination may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the disability affects the veteran and the veteran's ability to work, and statements from other people about how the veteran's symptoms affect the veteran.

Section 3.161(c) would state that VA will notify a claimant that, to substantiate a claim for temporary total disability due to hospitalization, the information and evidence must show that the veteran was hospitalized for treatment for a service-connected disability in a VA hospital or an approved hospital for more than 21 days or was hospitalized for observation for a service-connected disability at VA expense for more than 21 days. This is based on medical treatment records.

Section 3.161(d) would state that VA would notify a claimant that to substantiate a claim for temporary total disability due to surgery or other treatment the information and evidence must show that the veteran received surgery at a VA or other approved hospital or outpatient facility for a service-connected disability and that the surgery required convalescence for at least 1 month or resulted in severe postoperative residuals (such as incompletely healed surgical wounds, stumps of recent amputations, therapeutic immobilizations, house confinement, or required use of a wheelchair or crutches), or that the veteran received treatment at a VA or other approved hospital or outpatient facility that resulted in immobilization by cast, without surgery, of at least one major joint. This is based on medical treatment records.

Section 3.161(e) would state that VA would notify a claimant that to substantiate a claim for increased compensation because of the need for aid and attendance or bedridden status, medical treatment records, medical opinions, and competent non-medical evidence based on personal observations must show that the veteran requires the aid of another person to perform personal functions required in everyday living, such as bathing, feeding, or adjustment of prosthetics, or must remain in bed due to his or her disability or disabilities based on medical necessity and not based on a prescription of bed rest for purposes of convalescence or cure. VA also requires medical treatment records and medical reports showing that the veteran's need for aid and attendance or confinement to bed is a result of a service-connected disability.

In § 3.161(f), VA would state that, upon receipt of a claim for increased compensation based on being permanently housebound, VA will notify the claimant that the information and evidence must show that the veteran has a totally disabling service-connected disability. This may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the disability affects the veteran's ability to work, and statements from other people about how the veteran's symptoms affect the veteran. The information and evidence must also show that the veteran is substantially confined to the veteran's house, ward or clinical areas if institutionalized, or immediate premises due to a service-connected disability or disabilities. This is established by medical treatment records, medical opinions, and statements from non-medical people about how the disability affects the veteran and the veteran's ability to function.

Section 3.162 would explain the notice that VA would provide when a veteran files a claim for improved pension or increased pension. Section 3.162(a) would state that, if VA receives a claim for improved pension, VA will notify the claimant that the information and evidence must show the veteran served during a period of war.

In addition, VA will notify the claimant that the information and evidence must show that the veteran is 65 years of age or older, or alternatively, that the veteran is permanently and totally disabled due to a nonservice-connected disability, which means that the veteran is a patient in a nursing home for long-term care, receiving social security disability benefits; unemployable due to a disability reasonably certain to continue through the veteran's lifetime; or suffering from a disability that is reasonably certain to continue through the veteran's lifetime and would make it impossible for the average person to follow a substantially gainful occupation; or suffering from a disease or disorder that VA believes justifies a determination that people who have the disease or disorder are permanently and totally disabled. This may be established by Social Security Administration records or medical treatment records, medical opinions, statements from the veteran's employer about how the disability affects the veteran and the veteran's ability to work, and statements from other people about how the veteran's symptoms affect the veteran. VA will also notify the claimant that the information and evidence must show that the claimant's annual income and net worth do not exceed certain limits.

For reasons similar to those explained above concerning proposed § 3.160, we do not propose to provide notice of the criteria governing effective dates as part of the notice under section 5103(a)(1). By statute, the effective date of pension awards generally will be governed by the date of the application or by other facts that would necessarily be established by the evidence upon which the pension award is based. There ordinarily would be no other evidence relating solely to effective dates that would be necessary to substantiate a claim. However, in the event that

additional evidence would be relevant in a particular case at the stage of proceedings in which VA assigns an effective date, it may be addressed in the notices relevant to that stage of proceedings.

Section 3.162(b) would explain the notice that VA will provide upon receipt of a claim for increased pension. VA will notify the claimant that medical treatment records, medical opinions, and competent non-medical evidence based on personal observations must show that the claimant is in need of regular aid and attendance or is permanently housebound or, alternatively, the information and evidence must show that there has been a change in the claimant's income or net worth. A claimant is in need of regular aid and attendance if the claimant: (1) Has 5/200 visual acuity or less in both eyes; (2) has concentric contraction of the visual field to 5 degrees or less in both eyes; (3) is a patient in a nursing home because of mental or physical incapacity; or (4) requires the aid of another person in order to perform personal functions of everyday living, such as bathing, feeding, or adjusting a prosthetic device. A claimant is permanently housebound if the claimant is substantially confined to the claimant's house or immediate premises, or ward or clinical areas if institutionalized, because of a disability or disabilities and it is reasonably certain that the disability or disabilities will not improve during the claimant's lifetime.

Section 3.163 would explain the notice that VA will provide upon receipt of a claim for benefits from a veteran's survivor. In addition to notice regarding the type of claim filed by a veteran's survivor, VA will also notify the claimant of the information and evidence necessary to substantiate a claim for accrued benefits because the claimant may be entitled to benefits that were due and unpaid the veteran at death.

As set forth in § 3.163(a)(1), VA will notify a survivor who files a claim for dependency and indemnity compensation (DIC) based on a death related to active duty that the information and evidence must show that: (1) The veteran died during active duty; (2) VA awarded the veteran service connection for a disease or injury and medical evidence shows that the disease or injury caused or contributed to the veteran's death; or (3) the veteran had a disease or injury that was incurred or aggravated during active duty or was caused by an event during active duty, as shown by medical evidence, competent non-medical evidence based on personal observations, and use of applicable legal presumptions, and medical evidence shows that the disease or injury caused or contributed to the veteran's death.

We recognize that, in *Hupp* v. *Nicholson,* 21 Vet. App. 342, 352–53 (2007), the Veterans Court held that notice in the context of a DIC claim ''must include (1) A statement of the conditions, if any, for which a veteran was service connected at the time of his or [her] death; (2) an explanation of the evidence and information required to substantiate a DIC claim based on a previously service-connected condition; and (3) an explanation of the evidence and information required to substantiate a DIC claim based on a condition not yet service-connected.'' The proposed rule would include the latter two components, but not the first. As explained above, the Federal Circuit stated in *Vazquez-Flores,* 2009 WL 2835434, *6, *10, and *Wilson,* 506 F.3d at 1059, 1062, that the language in current section 5103(a)(1) requires generic notice tailored to the type of claim filed rather than veteran-specific notice. The notice required by *Hupp,* which was decided before *Vazquez-Flores* and *Wilson,* is not generic but rather would entail a review of the veteran's claim file to determine whether VA previously granted service connection for a veteran's disability.

In VA's judgment and experience, the generic notice described in § 3.163(a) would explain to a claimant the information and evidence necessary to substantiate a DIC claim based on a previously service-connected disability as well as a claim based on a disability that was not previously service connected. DIC claimants are members of the veteran's immediate family and generally will know or can easily determine whether the veteran was granted service connection for any conditions. Moreover, VA will already have that information and will consider it in developing and deciding the claim. DIC claimants will not need to submit evidence of such awards. Additionally, the fact that VA previously awarded the veteran service connection for certain conditions would not preclude a DIC claimant from establishing service connection for a different condition that caused the veteran's death. Recitation of the veteran's previously service-connected conditions, which may have no bearing upon the DIC claim, is not necessary in order to notify the claimant of the information and evidence VA needs to substantiate the claim. Requiring such notices tailored to the specific facts of each DIC claim would impose unnecessary burdens and delays in VA's claim processing.

Section 3.163(a)(2) would explain that VA will notify a survivor who files a claim for DIC based on a death related to active duty for training that the information and evidence must show one of the following: (1) That the veteran died during active duty for training; (2) that VA had granted the veteran service connection for a disease or injury and medical evidence shows that the service-connected disease or injury caused or contributed to the veteran's death; or (3) that the veteran was disabled during active duty for training due to a disease or injury incurred in the line of duty, as shown by medical evidence and competent non-medical evidence based on personal observation, and medical evidence shows that the disease or injury caused or contributed to the veteran's death.

Section 3.163(a)(3) would explain that VA will notify a survivor who files a claim for DIC based on a death related to inactive duty training that the information and evidence must show that the veteran: (1) Died during inactive duty training due to an injury incurred or aggravated in line of duty or an acute myocardial infarction, cardiac arrest or cerebrovascular accident during such training, as shown by medical evidence and competent non-medical evidence based on personal observations; or (2) had a disability that was due to an injury incurred or aggravated during inactive duty training or an acute myocardial infarction, cardiac arrest, or cerebrovascular accident during such training, as shown by medical evidence and competent non-medical evidence based on personal observations, and medical evidence shows that the injury, acute myocardial infarction, cardiac arrest, or cerebrovascular accident caused or contributed to the veteran's death.

Section 3.163(a)(4) would explain that VA will notify a survivor who files a claim for DIC that, if the veteran did not die from a service-connected disability, DIC is payable if the veteran was receiving compensation from VA for a service-connected disability that was rated totally disabling. The veteran must have received, or been entitled to receive, compensation for at least 10 years immediately before death; at least 5 years immediately preceding death and continuously since the veteran's release from active duty; or at least 1 year immediately preceding death, if the veteran was a former prisoner of war who died after September 30, 1999.

Section 3.163(a)(5) would set forth the notice that VA would provide upon

receipt of a claim for DIC based upon a veteran's death caused by VA treatment, vocational rehabilitation or compensated work therapy. VA would notify the claimant that generally the medical treatment records and medical opinions must show that the veteran's death was caused by VA hospital care, medical or surgical treatment or examination, VA training or rehabilitation services, or participation in VA's compensated work therapy program. The evidence also must show that veteran's death, which was caused by VA hospital care, medical or surgical treatment or examination, was the direct result of VA fault (carelessness, negligence, lack of proper skill, or error in judgment) or was the direct result of an event not reasonably foreseeable (*i.e.,* not an ordinary risk of the services provided). VA would notify the claimant that this requirement does not apply to claims based on VA training or rehabilitation services or compensated work therapy.

In § 3.163(b), VA would explain the notice that will be provided upon receipt of a claim for supplemental DIC for a veteran's child or parent. Section 3.163(b)(1) would state that, upon the receipt of a claim for supplemental DIC for a veteran's child, VA will provide notice that medical treatment records and medical opinions must show that the child, before his or her 18th birthday, became permanently incapable of self-support due to a mental or physical disability.

Section 3.163(b)(2) would state that, upon receipt of a claim for supplemental DIC for a veteran's parent, VA will provide notice that medical treatment records and medical opinions must show that the parent has corrected visual acuity of 5/200 or less, in both eyes, or concentric contraction of the visual field to 5 degrees or less; or is a patient in a nursing home because of mental or physical incapacity; or requires the aid of another person in order to perform personal functions required in everyday living, such as bathing, feeding, and dressing.

Section 3.163(c) would explain that, when VA receives a claim for improved pension from a veteran's surviving spouse or child, VA will notify the claimant that the information and evidence must show that the veteran served: (1) For ninety days or more during a period of war; (2) for ninety consecutive days, at least one of which was during a period of war; (3) for any length of time during a period of war and was discharged or released for a service-connected disability; or (4) for any length of time during a period of war and at the time of death was receiving or was entitled to receive VA compensation or service department retirement pay for a service-connected disability. The notice would further explain that the information and evidence must show that the claimant's annual income and net worth do not exceed certain limits.

Section 3.163(d) would explain that, when VA receives a claim for increased pension from a veteran's surviving spouse, VA would provide notice that to substantiate the claim, medical treatment records, medical opinions, and competent non-medical evidence based on personal observations must show that the claimant is in need of regular aid and attendance or permanently housebound and would provide notice of the criteria for establishing need for regular aid and attendance or permanent housebound status. The notice would explain that a claimant is in need of regular aid and attendance if the claimant: (1) Has 5/200 visual acuity or less in both eyes; (2) has concentric contraction of the visual field to 5 degrees or less in both eyes; (3) is a patient in a nursing home because of mental or physical incapacity; or (4) requires the aid of another person in order to perform personal functions of everyday living, such as bathing, feeding, or adjusting a prosthetic device. The notice would further explain that a claimant is permanently housebound if the claimant is substantially confined to the claimant's house or immediate premises because of a disability or disabilities and it is reasonably certain that the disability or disabilities will not improve during the claimant's lifetime.

Section 3.163(e) would explain that, when VA receives a claim for accrued benefits and survivor benefits, VA would provide notice that to substantiate a claim for accrued benefits, the information and evidence must show that the benefits were awarded to the individual by a VA rating or decision before the individual died, or evidence in VA's possession on or before the date of the individual's death, even if such evidence was not physically located in the VA claims folder on or before the date of death, shows that the individual had applied for and was entitled to the benefits. VA would also notify the claimant that accrued benefits are paid to the following persons in the following order of priority: (1) Veteran's surviving spouse; (2) veteran's children (in equal shares); and (3) veteran's surviving dependent parents (in equal shares) or the surviving dependent parent if only one is living.

Proposed new § 3.164 would explain the notice that VA will provide upon receipt of an application for specially adapted housing, special home adaptation grant, allowance for an automobile or automobile adaptive equipment, clothing allowance, and monetary allowances for certain children provided under chapter 18 of title 38, United States Code.

Section 3.164(a) would explain that, upon receipt of an application for specially adapted housing, VA would notify the claimant that medical treatment records and medical opinions must show that the veteran or servicemember on active duty is permanently and totally disabled due to one of the following: (1) Loss, or loss of use, of both lower extremities requiring the use of braces, crutches, canes, or a wheelchair to move from place to place; (2) blindness in both eyes so that the veteran can see only light, together with the loss, or loss of use of one lower extremity; (3) loss, or loss of use, of one lower extremity, together with a disease or injury that affects the veteran's balance or ability to move forward and requires the use of braces, crutches, canes, or a wheelchair in order to move from place to place; (4) loss, or loss of use, of one lower extremity, together with loss or loss of use of one upper extremity that affects the veteran's balance or ability to move forward and requires the use of braces, crutches, canes, or a wheelchair in order to move from place to place; (5) loss, or loss of use, of both upper extremities that prevents the veteran from using the arms at or above the elbows; or (6) severe burn injury. The notice would further explain that the information and evidence must show that the veteran or servicemember suffered the disability as a result of an injury, disease, or event in line of duty in the active military, naval or air service, or as the result of VA hospital care, medical or surgical treatment or examination under circumstances involving VA carelessness, negligence, lack of proper skill or error in judgment or an event not reasonably foreseeable, or as the result of VA training or rehabilitation services or participation in VA's compensated work therapy program.

Section 3.164(b) would explain that upon receipt of a claim for a special home adaptation grant, VA would notify the claimant that medical treatment records and medical opinions must show that the veteran or servicemember on active duty is permanently and totally disabled due to a service-connected disability resulting from blindness in both eyes with 5/200 visual acuity or less; anatomical loss or loss of use of both hands; or severe burn injury. The notice would further explain that

the information and evidence must establish that the veteran or servicemember suffered the disability as a result of an injury, disease, or event in line of duty in the active military, naval or air service, or as the result of VA hospital care, medical or surgical treatment or examination under circumstances involving VA carelessness, negligence, lack of proper skill or error in judgment or an event not reasonably foreseeable, or as the result of VA training or rehabilitation services or participation in VA's compensated work therapy program.

Section 3.164(c) would explain the notice that VA would give a claimant for an automobile allowance and/or adaptive equipment. VA would notify a claimant for an automobile allowance and adaptive equipment that medical treatment records and medical opinions must show that a veteran is entitled to compensation as a result of, or a servicemember on active duty is disabled due to the loss, or permanent loss of use, of at least a foot or a hand or permanent impairment of vision in both eyes, resulting in vision of 20/200 or less in the better eye with glasses or vision of 20/200 or better, if there is a severe defect in peripheral vision. The notice would further explain that the information and evidence must establish that the veteran or servicemember suffered the disability as a result of an injury, disease, or event in line of duty in the active military, naval or air service, or as a result of VA hospital care, medical or surgical treatment or examination under circumstances involving VA carelessness, negligence, lack of proper skill or error in judgment or an event not reasonably foreseeable, or as a result of VA training or rehabilitation services or participation in VA's compensated work therapy program.

Further, VA would notify a claimant for adaptive equipment that such a claim may also be substantiated by information and evidence showing that a veteran is entitled to compensation for ankylosis of at least one knee or one hip. The information and evidence must show that the veteran suffered the disability as a result of an injury, disease, or event in line of duty in the active military, naval or air service, or as a result of VA hospital care, medical or surgical treatment or examination under circumstances involving VA carelessness, negligence, lack of proper skill or error in judgment or an event not reasonably foreseeable, or as a result of VA training or rehabilitation services or participation in VA's compensated work therapy program.

Section 3.164(d) would explain the notice that VA will provide upon receipt of an application for a clothing allowance. VA would notify a claimant that the information and evidence must show that the veteran suffered a disability as a result of an injury, disease, or event in line of duty in the active military, naval or air service, or as a result of VA hospital care, medical or surgical treatment or examination under circumstances involving VA carelessness, negligence, lack of proper skill or error in judgment or an event not reasonably foreseeable, or as a result of VA training or rehabilitation services or participation in VA's compensated work therapy program. VA would also notify the claimant that a VA examination or hospital report or an examination report from a government or private facility must show that the veteran wears or uses a prosthetic or orthopedic appliance because the qualifying disability tends to wear out or tear the veteran's clothes, or the veteran uses prescription medication for a skin condition which is due to a qualifying disability and the medication causes irreparable damage to the veteran's outer garments.

Section 3.164(e) would explain the notice that VA will provide upon receipt of an application for a monetary allowance for an individual with spina bifida born to a Vietnam veteran. VA will notify a claimant that the information and evidence must show that: (1) The individual's biological father or mother is or was a veteran who performed active military, naval, or air service in the Republic of Vietnam during the period beginning on January 9, 1962, and ending on May 7, 1975, including service in the waters offshore and service in other locations if the conditions of service involved duty or visitation in the Republic of Vietnam, and (2) the individual was conceived on or after the date on which the veteran first served in the Republic of Vietnam. VA would notify the claimant that this is based on evidence such as service department records and a birth certificate, church record of baptism, affidavit or certified statement from a physician or midwife present during the birth, or notarized copy of a Bible or other family record containing reference to the birth and medical treatment records and medical opinions showing that the individual has any form or manifestation of spina bifida except spina bifida occulta.

VA would also notify the claimant that VA will examine the nature and severity of the individual's disability due to spina bifida and assign an evaluation of Level 1 to Level 3 by comparing the individual's symptoms to the criteria in § 3.814 of title 38, Code of Federal Regulations, and that this is based on medical treatment records and reports and statements from the individual's employer and other people about how the disability affects the individual's ability to work and function.

Section 3.164(f) would explain the notice that VA will provide upon receipt of an application for a monetary allowance for an individual with certain birth defects born to a female Vietnam veteran. VA will notify a claimant that the information and evidence must show that: (1) The individual's biological mother is or was a veteran who performed active military, naval, or air service in the Republic of Vietnam during the period beginning on February 28, 1961, and ending on May 7, 1975, including service in the waters offshore and service in other locations if the conditions of service involved duty or visitation in the Republic of Vietnam; and (2) the individual was conceived on or after the date on which the veteran first served in the Republic of Vietnam. VA would notify the claimant that this is based on evidence such as service department records and a birth certificate, church record of baptism, affidavit or certified statement from a physician or midwife present during the birth, or notarized copy of a Bible or other family record containing reference to the birth and medical treatment records and medical opinions showing that the individual has a covered birth defect.

VA would also notify the claimant that VA will examine the nature and severity of the individual's disability to the birth defect(s) and assign an evaluation of Level 1 to Level 3 by comparing the individual's symptoms to the criteria in § 3.815 of title 38, Code of Federal Regulations, and that this is based on medical treatment records and reports and statements from the individual's employer and other people about how the disability affects the individual's ability to work and function.

Proposed new § 3.165 would explain the notice that VA will provide upon receipt of an application to reopen a previously denied claim based on new and material evidence. In *Kent* v. *Nicholson,* 20 Vet. App. 1, 9 (2006), the Veterans Court stated that ''VA must inform a claimant seeking to reopen a previously and finally disallowed claim of the unique character of evidence that must be presented'' because ''[t]he terms 'new' and 'material' have specific, technical meanings that are not commonly known to VA claimants.''

Therefore, in addition to the notice described in §§ 3.160 through 3.164 regarding the type of benefit sought, VA will notify a claimant that ''new'' and ''material'' evidence is evidence not previously submitted to VA, that by itself or when considered with previous evidence of record, relates to an unestablished fact necessary to substantiate the claim and raises a reasonable possibility of substantiating the claim. However, we recognize that the Veterans Court also stated in *Kent,* 20 Vet. App. at 10, that, upon receipt of a claim to reopen, VA must ''look at the bases for the denial in the prior decision and * * * [provide] a notice letter that describe[s] what evidence would be necessary to substantiate th[e] element or elements * * * that were found insufficient in the previous denial.'' This holding in *Kent,* which requires VA to provide case-specific notice upon receipt of a claim to reopen, is inconsistent with the subsequent Federal Circuit decisions in *Vazquez-Flores* and *Wilson,* holding that section 5103(a)(1) is satisfied by ''generic notice,'' *i.e.,* notice that ''identif[ies] the information and evidence necessary to substantiate the particular type of claim being asserted'' by a claimant and rejecting the argument that the statute requires specific notice of missing evidence with respect to a particular claim. 2009 WL 2835434, *6, *10; 506 F.3d at 1059–60. VA will therefore not provide such case-specific notice to a claimant who has filed an application to reopen a previously denied claim. Pursuant to 38 U.S.C. 5104(b) and 7104(d)(1), if VA denies a claim, it must provide the claimant a written statement of the reasons for the denial and of the evidence considered. Accordingly, the type of notice to be provided under proposed § 3.165 will be sufficient to inform claimants as to the types of evidence needed to reopen a claim in view of the information previously provided to the claimants.

In allowing VA to provide generic rather than case-specific notice upon receipt of a claim to reopen, proposed new § 3.165 would promote the efficiency of the veterans' benefit adjudication process. VA currently receives approximately 800,000 claims annually, most of which require VA to provide notice under 38 U.S.C. 5103(a)(1). The type of notice that would be provided by VA upon receipt of a claim to reopen would allow the Department to respond quickly with notice that is easily understood by a claimant. The type of notice required by the Veterans Court in *Kent,* by contrast, imposes administrative burdens that, in VA's view, are not required by section 5103(a)(1) and that would result in undue delays in VA claims processing.

We explain in § 3.166 that VA will provide notice of the evidence and information necessary to substantiate a claim for any other benefit governed by part 3 of title 38, Code of Federal Regulations, consistent with the statutory and regulatory eligibility criteria for the benefit sought.

Paperwork Reduction Act of 1995

This document contains no provisions constituting a new collection of information under the Paperwork Reduction Act (44 U.S.C. 3501–3521).

Unfunded Mandates

The Unfunded Mandates Reform Act of 1995 requires, at 2 U.S.C. 1532, that agencies prepare an assessment of anticipated costs and benefits before issuing any rule that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more (adjusted annually for inflation) in any 1 year. This proposed rule would have no such effect on State, local, and tribal governments, or on the private sector.

Executive Order 12866

Executive Order 12866 directs agencies to assess all costs and benefits of available regulatory alternatives and, when regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity). The Executive Order classifies a ''significant regulatory action,'' requiring review by the Office of Management and Budget (OMB) unless OMB waives such review, as any regulatory action that is likely to result in a rule that may: (1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

The economic, interagency, budgetary, legal, and policy implications of this proposed rule have been examined and it has been determined to be a significant regulatory action under Executive Order 12866 because it may raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Regulatory Flexibility Act

The Secretary hereby certifies that this proposed regulatory amendment would not have a significant economic impact on a substantial number of small entities as they are defined in the Regulatory Flexibility Act, 5 U.S.C. 601–612. This proposed amendment would not directly affect any small entities. Only individuals could be directly affected. Therefore, pursuant to 5 U.S.C. 605(b), this proposed amendment is exempt from the initial and final regulatory flexibility analysis requirements of sections 603 and 604.

Catalog of Federal Domestic Assistance

The Catalog of Federal Domestic Assistance numbers and titles for this program are 64.100, Automobiles and Adaptive Equipment for Certain Disabled Veterans and Members of the Armed Forces; 64.101, Burial Expenses Allowance for Veterans; 64.104, Pension for Non-Service-Connected Disability for Veterans; 64.105, Pension to Veterans Surviving Spouses, and Children; 64.106, Specially Adapted Housing for Disabled Veterans; 64.109, Veterans Compensation for Service-Connected Disability, and 64.110, Veterans Dependency and Indemnity Compensation for Service Connected Death.

List of Subjects in 38 CFR Part 3

Administrative practice and procedure, Claims, Disability benefits, Health care, Pensions, Veterans, Vietnam.

Approved: September 29, 2009.

John R. Gingrich,

Chief of Staff, Department of Veterans Affairs.

For the reasons set forth in the preamble, VA proposes to amend 38 CFR part 3, subpart A, as follows:

PART 3—ADJUDICATION

Subpart A—Pension, Compensation, and Dependency and Indemnity Compensation

1. The authority citation for part 3, subpart A continues to read as follows:

Authority: 38 U.S.C. 501(a), unless otherwise noted.

2. Revise § 3.159 to read as follows:

§ 3.159 Notice to claimants of required information and evidence.

(a) *Definitions.* For purposes of §§ 3.159 through 3.166, the following definitions apply.

(1) *Substantially complete application* means an application containing or identifying the claimant's name; his or her relationship to the veteran, if applicable; sufficient service information for VA to verify the claimed service, if applicable; the benefit claimed and any medical condition(s) on which it is based; the claimant's signature; and in claims for nonservice-connected disability or death pension and parents' dependency and indemnity compensation, a statement of income.

(2) *Type of claim filed* means an original claim, claim to reopen a prior final decision on a claim, or a claim for increase in benefits.

(3) *Type of benefit sought* means the general nature of the benefits sought, such as disability compensaton, increased compensation, dependency and indemnity compensation, and pension, rather than the specific disabilities, theories of entitlement, or other case-specific facts.

(4) *Information* means non-evidentiary facts, such as the claimant's Social Security number or address; the name and military unit of a person who served with the veteran; or the name and address of a medical care provider who may have evidence pertinent to the claim.

(5) *Event* means one or more incidents associated with places, types, and circumstances of service giving rise to disability.

(Authority: 38 U.S.C. 5103(a)(1) and (2))

(b) For the purpose of the notice requirements in §§ 3.159 through 3.166, notice to the claimant means notice to the claimant or his or her fiduciary, if any, as well as to his or her representative, if any.

(Authority: 38 U.S.C. 5102(b), 5103(a)(1))

(c) *Notice of incomplete application.* If VA receives an incomplete application for benefits, it will notify the claimant of the information necessary to complete the application and will defer assistance until the claimant submits this information.

(Authority: 38 U.S.C. 5103(a)(1) and (2))

(d) *Notice of required information and evidence*—(1) *Purpose.* When VA receives a complete or substantially complete application for benefits, the Department will provide a claimant with notice of the general information and types of evidence that could be used by VA in deciding the type of claim filed for the type of benefit sought. This notice is intended to assist claimants in determining what types of information and evidence available to them may assist in substantiating their claims. VA generally will not, in this notice, identify specific evidence necessary to substantiate an individual claimant's case.

(Authority: 38 U.S.C. 5103(a)(1) and (2))

(2) *Content of notice.* When VA receives a complete or substantially complete application for benefits, it will notify a claimant of—

(i) the general information and evidence that is necessary to substantiate entitlement for the type of claim filed and benefit sought as set forth in §§ 3.160 through 3.166.

(ii) VA's obligation to—

(A) Obtain relevant records that the claimant adequately identifies and authorizes VA to obtain from any Federal agency, including the Department of Defense, Social Security Administration and VA medical centers, or from any other entity or person; and

(B) Provide a medical examination or obtain a medical opinion if necessary to decide a claim for disability compensation; and

(iii) The claimant's obligation to—

(A) Provide VA with enough information to identify and locate the existing records, including the person, company, agency, or other custodian holding the records; the approximate time frame covered by the records; and, in the case of medical treatment records, the condition for which treatment was provided; and

(B) Authorize, if necessary, the release to VA of existing records in a form acceptable to the person, company, agency, or other custodian holding the records.

(Authority: 38 U.S.C. 5103(a)(1) and (2))

(3) *Circumstances under which VA will not provide notice.* VA will not provide notice under §§ 3.159 through 3.166 if:

(i) The claim can be granted when the initial application is filed;

(ii) The claimant has filed a notice of disagreement, unless the notice provided by VA prior to receipt of the notice of disagreement does not comply with this section; or

(iii) As a matter of law, the claimant is not entitled to the benefit sought.

(Authority: 38 U.S.C. 5103(a)(1) and (2))

(4) *Time to respond.*

(i) A claimant must provide the information and evidence necessary to substantiate a claim that VA notifies a claimant to provide within 1 year of the date of the notice. If the information and evidence is not received by VA within 1 year, VA cannot pay or provide any benefits based on the application.

(ii) If the claimant has not responded to VA's request for information or evidence within 30 days, VA may decide the claim prior to the expiration of the 1-year period based on all the information and evidence contained in the file, including information and evidence it has obtained on behalf of the claimant and any VA medical examinations or medical opinions. If VA does so, however, and the claimant subsequently provides the information and evidence within 1 year of the date of the request, VA must readjudicate the claim.

(Authority: 38 U.S.C. 5103(a)(1) and (2) and (b))

3. Redesignate §§ 3.160 and 3.161 as §§ 3.170 and 3.171 respectively.

4. Add new §§ 3.160 through 3.167 to read as follows:

Sec.

3.160 Notice upon receipt of application for disability compensation.
3.161 Notice upon receipt of application for increased disability compensation.
3.162 Notice upon receipt of application for improved pension.
3.163 Notice upon receipt of application for survivor benefits.
3.164 Notice upon receipt of application for special benefits.
3.165 Notice upon receipt of claim to reopen based on new and material evidence.
3.166 Notice upon receipt of claim for other benefits governed by part 3.
3.167 VA's duty to assist claimants in obtaining evidence.

§ 3.160 Notice upon receipt of application for disability compensation.

(a) *Compensation for service-connected disability.* VA will notify a claimant that information and evidence of the following is necessary to substantiate an original or reopened claim for service connection for a veteran's disability:

(1) *Active Duty.* (i) *Existence of a disability.* The veteran has a current physical or mental disability. This is established by medical treatment records, medical opinions, and evidence from non-medical persons about persistent and recurrent symptoms of disability they have observed.

(ii) *Inservice incurrence or aggravation.* Medical treatment records, medical opinions, and, in certain circumstances, evidence from non-medical persons show that the veteran had—

(A) An injury or disease that was incurred or aggravated in service;

(B) Symptoms that were noted during service or during an applicable presumptive period and that persisted

until diagnosis of an injury or disease causing the symptoms; or

(C) An event in service capable of causing injury or disease.

(iii) *Relationship between the current disability and an injury, disease, symptoms, or event during military service.* There is a relationship between the veteran's inservice disease, injury, symptoms, or event and the current disability, which is generally established by medical treatment records, medical opinions, or by use of a legal presumption that the disability is related to a particular type of military service, such as detention as a prisoner of war, participation in a radiation-risk activity, or service in Vietnam or the Southwest Asia theater of operations during the Gulf War.

(iv) *Extent of disability.* VA will examine the nature, duration, and severity of the veteran's symptoms and assign a disability rating from 0 percent to 100 percent by comparing the symptoms to the criteria in the VA Schedule for Rating Disabilities found in title 38, Code of Federal Regulations. This may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the veteran's symptoms affect the veteran's ability to work and from other people about how the veteran's symptoms affect the veteran.

(2) *Active Duty for Training.* (i) *Existence of a disability.* The claimant has a current physical or mental disability. This is established by medical treatment records, medical opinions, and evidence from non-medical persons about persistent and recurrent symptoms of disability they have observed.

(ii) *Disability during active duty for training.* The claimant was disabled during active duty for training from—

(A) A disease or injury that was incurred or aggravated in line of duty, which is generally established by medical treatment records and medical opinions;

(B) Symptoms that were noted during active duty for training and that persisted until diagnosis of an injury or disease causing the symptoms, which is established by medical treatment records, medical opinions and competent non-medical evidence based on personal observations; or

(C) An event during active duty for training capable of causing injury or disease.

(iii) *Relationship between the current disability and disability during active duty for training.* The claimant's current disability is due to the disability suffered during active duty for training. This is generally established by medical treatment records and medical opinions.

(iv) *Extent of disability.* VA will examine the nature, duration, and severity of the claimant's symptoms and assign a disability rating from 0 percent to 100 percent by comparing the symptoms to the criteria in the VA Schedule for Rating Disabilities found in title 38, Code of Federal Regulations. This may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the disability affects the claimant's ability to work, and statements from other people about how the claimant's symptoms affect the claimant.

(3) *Inactive Duty Training.* (i) *Existence of a disability.* The claimant has a current physical or mental disability. This is established by medical treatment records, medical opinions, and evidence from non-medical persons about persistent and recurrent symptoms of disability they have observed.

(ii) *Disability during inactive duty training.* Medical treatment records, medical opinions, and competent non-medical evidence based on personal observations show that the claimant was disabled during inactive duty training from—

(A) An injury incurred or aggravated during inactive duty training;

(B) An acute myocardial infarction;

(C) A cardiac arrest; or

(D) A cerebrovascular accident.

(iii) *Relationship between the current disability and disability during inactive duty for training.* The claimant's current disability is due to the disability suffered during inactive duty training. This is generally established by medical treatment records, medical opinions, and competent non-medical evidence based on personal observations.

(iv) *Extent of disability.* VA will examine the nature, duration, and severity of the claimant's symptoms and assign a disability rating from 0 percent to 100 percent by comparing the symptoms to the criteria in the VA Schedule for Rating Disabilities found in title 38, Code of Federal Regulations. This may be based on medical treatment records, medical opinions, statements from the claimant's employer about how the disability affects the claimant's ability to work, and statements from other people about how the claimant's symptoms affect the claimant.

(b) *Compensation for Disability Caused or Aggravated by Service-Connected Disability (Secondary Service Connection)*—(1) *Existence of additional disability.* The veteran has a current physical or mental disability in addition to the veteran's service-connected disability. This is established by medical treatment records, medical opinions, and evidence from non-medical persons about persistent and recurrent symptoms of disability they have observed.

(2) *Relationship between the additional disability and a service-connected disability.* The veteran's additional disability is related to the veteran's service-connected disability. This is generally established by medical treatment records and medical opinions.

(3) *Extent of disability.* VA will examine the nature, duration, and severity of the veteran's symptoms and assign a disability rating from 0 percent to 100 percent by comparing the symptoms to the criteria in the VA Schedule for Rating Disabilities found in title 38, Code of Federal Regulations. This may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the additional disability affects the veteran's ability to work, and statements from other people about how the veteran's symptoms affect the veteran.

(c) *Disability caused by VA treatment, vocational rehabilitation, or compensated work therapy*—(1) *Existence of an additional disability or aggravation of existing injury or disease.* The veteran has an additional physical or mental disability or an aggravation of an existing injury or disease. This is established by medical treatment records, medical opinions, and evidence from non-medical persons about persistent and recurrent symptoms of disability they have observed.

(2) *Relationship between the additional disability or aggravation and VA treatment, VA vocational rehabilitation, or compensated work therapy.* The veteran's additional disability or aggravation of an existing injury or disease was caused by VA hospital care, medical or surgical treatment or examination, VA training or rehabilitation services, or participation in VA's compensated work therapy program. This is generally established by medical treatment records and medical opinions.

(3) *VA fault.* The additional disability or aggravation caused by VA hospital care, medical or surgical treatment or examination was the direct result of VA fault (carelessness, negligence, lack of proper skill, or error in judgment) or was the direct result of an event not reasonably foreseeable (*i.e.,* not an ordinary risk of the services provided). This requirement does not apply to claims based on VA training or rehabilitation services or compensated work therapy.

(4) *Extent of disability.* VA will examine the nature, duration, and severity of the veteran's symptoms and assign a disability rating from 0 percent to 100 percent by comparing the symptoms to the criteria in the VA Schedule for Rating Disabilities found in title 38, Code of Federal Regulations. This may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the additional disability affects the veteran's ability to work, and statements from other people about how the veteran's symptoms affect the veteran.

(Authority: 38 U.S.C. 5103(a)(1) and (2))

§ 3.161 Notice upon receipt of application for increased disability compensation.

VA will notify a claimant that information and evidence of the following is necessary to substantiate the following types of claims for increased disability compensation:

(a) *Increased schedular rating for a service-connected disability*—(1) *Increase in extent of service-connected disability.* The veteran's service-connected disability has gotten worse or increased in severity. This is based on medical treatment records, medical opinions, and statements from non-medical persons about persistent and recurrent symptoms of disability they have observed.

(2) *Current extent of disability.* VA will examine evidence regarding the nature, duration, and severity of the veteran's symptoms and assign a disability rating from 0 percent to 100 percent by comparing the veteran's current symptoms to the criteria in the VA Schedule for Rating Disabilities found in title 38, Code of Federal Regulations. This may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the additional disability affects the veteran's ability to work, and statements from other people about how the veteran's symptoms affect the veteran.

(b) *Total Disability Rating for Individual Unemployability.* VA will examine the evidence to determine whether a veteran is unable to secure and follow substantial gainful employment because of a service-connected disability rated at least 60 percent disabling or more than one service-connected disability with one disability rated at 40 percent or more and a combined rating of at least 70 percent, or whether the veteran is unemployable due to service-connected disability even if these ratings are not met. This may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the disability affects the veteran and the veteran's ability to work, and statements from other people about how the veteran's symptoms affect the veteran.

(c) *Temporary total disability due to hospitalization.* The veteran was hospitalized for treatment for a service-connected disability in a VA hospital or an approved hospital for more than 21 days or was hospitalized for observation for a service-connected disability at VA expense for more than 21 days. This is based on medical treatment records.

(d) *Temporary total disability due to surgery or other treatment.* The veteran received surgery at a VA or other approved hospital or outpatient facility for a service-connected disability and the surgery required convalescence for at least 1 month or resulted in severe postoperative residuals (such as incompletely healed surgical wounds, stumps of recent amputations, therapeutic immobilizations, house confinement, or required use of a wheelchair or crutches), or the veteran received treatment at a VA or other approved hospital or outpatient facility that resulted in immobilization by cast, without surgery, of at least one major joint. This is based on medical treatment records, particularly on reports of hospital discharge or release from outpatient treatment.

(e) *Aid and attendance or bedridden.* The information and evidence must show that, as a result of a service-connected disability, the veteran is in need of aid and attendance or confined to bed.

(1) *Need for aid and attendance or confinement.* The veteran requires the aid of another person to perform personal functions required in everyday living, such as bathing, feeding, or adjustment of prosthetics, or must remain in bed due to his or her disability or disabilities based on medical necessity and not based on a prescription of bed rest for purposes of convalescence or cure. This is shown by medical treatment records, medical opinions, and competent non-medical evidence based on personal observations.

(2) *Relationship between service-connected disability and need for aid and attendance or confinement.* The veteran's need for aid and attendance or confinement to bed is a result of a service-connected disability. This is shown by medical treatment records and medical opinions.

(f) *Permanently housebound*—(1) *Totally disabling service-connected disability.* The veteran has a totally disabling service-connected disability. This may be based on medical treatment records, medical opinions, statements from the veteran's employer about how the disability affects the veteran's ability to work, and statements from other people about how the veteran's symptoms affect the veteran.

(2) *Nature of Confinement.* The veteran is substantially confined to the veteran's house, ward or clinical areas if institutionalized, or immediate premises. This is established by medical treatment records and medical opinions.

(3) *Relationship between confinement and service-connected disability.* The veteran's confinement is a result of service-connected disability or disabilities, which are reasonably certain to remain throughout the veteran's lifetime. This is generally established by medical treatment records and medical opinions.

(Authority: 38 U.S.C. 5103(a)(1) and (2))

§ 3.162 Notice upon receipt of application for improved pension.

VA will notify a claimant that information and evidence of the following is necessary to substantiate a claim for improved pension or increased pension:

(a) *Improved pension.* VA will notify a claimant that information and evidence of the following is necessary to substantiate a claim for improved pension—

(1) The veteran served during a period of war.

(2) The veteran is 65 years of age or older or permanently and totally disabled due to a nonservice-connected disability, which is shown by Social Security Administration records or medical treatment records, medical opinions, statements from the veteran's employer about how the disability affects the claimant and the veteran's ability to work, and statements from other people about how the veteran's symptoms affect the veteran. Permanently and totally disabled means that the veteran is:

(i) A patient in a nursing home for long-term care;

(ii) Receiving social security disability benefits;

(iii) Unemployable due to a disability reasonably certain to continue through the veteran's lifetime;

(iv) Suffering from a disability that is reasonably certain to continue through the veteran's lifetime and would make it impossible for the average person to follow a substantially gainful occupation; or

(v) Suffering from a disease or disorder that VA believes justifies a determination that people who have the disease are disorder are permanently and totally disabled.

(3) The claimant's annual income and net worth do not exceed certain limits.

(b) *Increased pension.* VA will notify a claimant that medical treatment records, medical opinions, and competent non-medical evidence based on personal observations must show that the claimant is in need of regular aid and attendance or is permanently housebound or, alternatively, the information and evidence must show that there is a change in the claimant's income or net worth.

(1) A claimant is in need of regular aid and attendance if the claimant—

(i) Has 5/200 visual acuity or less in both eyes;

(ii) Has concentric contraction of the visual field to 5 degrees or less in both eyes;

(iii) Is a patient in a nursing home because of mental or physical incapacity; or

(iv) Requires the aid of another person in order to perform personal functions of everyday living, such as bathing, feeding, or adjusting a prosthetic device.

(2) A claimant is permanently housebound if the claimant is substantially confined to the claimant's house or immediate premises, or ward or clinical area if institutionalized, because of a disability or disabilities and it is reasonably certain that the disability or disabilities will not improve during the claimant's lifetime.

(Authority: 38 U.S.C. 5103(a)(1) and (2))

§ 3.163 Notice upon receipt of application for survivor benefits.

VA will notify a claimant that information and evidence of the following is necessary to substantiate the following types of claims for survivor benefits and, in addition to the notice described in paragraphs (a) through (d) of this section, as applicable, VA will also provide each applicant for survivor benefits the notice described in paragraph (e) of this section:

(a) *Dependency and indemnity compensation*—(1) *Death related to active duty.* VA will notify the claimant that the information and evidence must show any of the following in order to substantiate a claim for dependency and indemnity compensation for death related to active duty:

(i) The veteran died while on active duty;

(ii) VA had granted the veteran service connection for a disease or injury and medical evidence shows that the service-connected disease or injury caused or contributed to the veteran's death; or

(iii) The veteran had a disease or injury that was incurred or aggravated during active duty or was caused by an event during active duty, as shown by medical evidence, competent non-medical evidence based on personal observations, and use of applicable legal presumptions, and medical evidence shows that the disease or injury caused or contributed to the veteran's death.

(2) *Death related to active duty for training.* VA will notify the claimant that the information and evidence must show the following in order to substantiate a claim for dependency and indemnity compensation for death related to active duty for training:

(i) The veteran died during active duty for training;

(ii) VA had granted the veteran service connection for a disease or injury and medical evidence shows that the service-connected disease or injury caused or contributed to the veteran's death; or

(iii) The veteran was disabled during active duty for training due to a disease or injury incurred in the line of duty, as shown by medical evidence and competent non-medical evidence based on personal observation, and medical evidence shows that the disease or injury caused or contributed to the veteran's death.

(3) *Death related to inactive duty training.* VA will notify the claimant that the information and evidence must show the following in order to substantiate a claim for dependency and indemnity compensation for death related to inactive duty training:

(i) The veteran died during inactive duty training due to an injury incurred or aggravated in line of duty or an acute myocardial infarction, cardiac arrest or cerebrovascular accident during such training, as shown by medical evidence and competent non-medical evidence based on personal observations; or

(ii) The veteran had a disability that was due to an injury incurred or aggravated during inactive duty training or an acute myocardial infarction, cardiac arrest, or cerebrovascular accident during such training, as shown by medical evidence and competent non-medical evidence based on personal observations, and medical evidence shows that the injury, acute myocardial infarction, cardiac arrest, or cerebrovascular accident caused or contributed to the veteran's death.

(4) *Death from nonservice-connected disability.* In addition to providing notice under paragraphs (a)(1), (a)(2), or (a)(3) of this section as appropriate based on the veteran's service, VA will notify claimants for dependency and indemnity compensation that, if the veteran did not die from a service-connected disability, dependency and indemnity compensation is payable if the information and evidence shows that the veteran was receiving or was entitled to receive compensation from VA for a service-connected disability that was rated totally disabling for—

(i) At least 10 years immediately preceding death;

(ii) At least 5 years immediately preceding death and continuing since the veteran's release from active duty; or

(iii) At least 1 year immediately preceding death, if the veteran was a former prisoner of war who died after September 30, 1999.

(5) *Death caused by VA treatment, vocational rehabilitation, or compensated work therapy.* VA will notify the claimant that the information and evidence must show the following in order to substantiate a claim for dependency and indemnity compensation for death caused by VA treatment, vocational rehabilitation or compensated work therapy:

(i) The veteran's death was caused by VA hospital care, medical or surgical treatment or examination, VA training or rehabilitation services, or participation in VA's compensated work therapy program. This is generally established by medical treatment records and medical opinions.

(ii) The veteran's death caused by VA hospital care, medical or surgical treatment or examination was the direct result of VA fault (carelessness, negligence, lack of proper skill, or error in judgment) or was the direct result of an event not reasonably foreseeable (*i.e.,* not an ordinary risk of the services provided). This requirement does not apply to claims based on VA training or rehabilitation services or compensated work therapy.

(b) *Supplemental dependency and indemnity compensation.* VA will notify the claimant that the following evidence is needed to substantiate a claim for supplemental dependency and indemnity compensation:

(1) *For a child.* Medical treatment records and medical opinions must show that a veteran's child, before his or her 18th birthday, became permanently incapable of self-support due to a mental or physical disability.

(2) *For parents.* Medical treatment records and medical opinions must show that a veteran's parent is in need of the aid and attendance, which means that the parent—

(i) Has corrected visual acuity of 5/200 or less, in both eyes, or concentric contraction of the visual field to 5 degrees or less; or

(ii) Is a patient in a nursing home because of mental or physical incapacity; or

(iii) Requires the aid of another person in order to perform personal functions required in everyday living, such as bathing, feeding, and dressing.

(c) *Improved pension for veteran's surviving spouse or child.* VA will notify a veteran's surviving spouse or child claiming improved pension that information and evidence of the following is needed to substantiate the claim:

(1) The veteran served in the active military, naval, or air service—

(i) For ninety days or more during a period of war;

(ii) For ninety consecutive days, at least one of which was during a period of war;

(iii) For any length of time during a period of war and was discharged or released from such service for a service-connected disability; or

(iv) For any length of time during a period of war and at the time of death was receiving or was entitled to receive VA disability compensation or service department retirement pay for a service-connected disability; and

(2) The claimant's annual income and net worth do not exceed certain limits.

(d) *Increased pension for veteran's surviving spouse.* VA will notify a veteran's surviving spouse claiming increased pension that information and evidence of the following is needed to substantiate the claim:

(1) Medical treatment records, medical opinions, and competent non-medical evidence based on personal observations must show that the surviving spouse is—

(i) In need of regular aid and attendance, which means the surviving spouse—

(A) Has visual acuity of 5/200 or less in both eyes;

(B) Has concentric contraction of the visual field to 5 degrees or less in both eyes;

(C) Is a patient in a nursing home because of mental or physical incapacity; or

(D) Requires the aid of another person in order to perform personal functions of everyday living, such as bathing, feeding, or adjusting a prosthetic device.

(2) Permanently housebound, which means that the surviving spouse is substantially confined to the house or immediate premises because of a disability or disabilities and it is reasonably certain that the disability or disabilities will not improve during the claimant's lifetime.

(e) *Accrued benefits.* VA will notify a claimant for accrued benefits and a claimant for survivor benefits that the following information and evidence is necessary to substantiate a claim for periodic monetary VA benefits that were due, but not paid to, an individual before the individual's death.

(1) The benefits were awarded to the individual by a VA rating or decision before the individual died; or

(2) Evidence in VA's possession on or before the date of the individual's death, even if such evidence was not physically located in the VA claims folder on or before the date of death, shows that the individual had applied for and was entitled to the benefits.

(3) Accrued benefits are paid to the following persons in the following order of priority:

(i) Veteran's surviving spouse.

(ii) Veteran's children (in equal shares).

(iii) Veteran's surviving dependent parents (in equal shares) or the surviving dependent parent if only one is living.

(Authority: 38 U.S.C. 5103(a)(1) and (2))

§ 3.164 Notice upon receipt of application for special benefits.

VA will notify a claimant that the following information and evidence is necessary to substantiate the claims for special benefits.

(a) *Specially Adapted Housing.* For purposes of a claim for specially adapted housing—

(1) *Permanent and total disability.* Medical treatment records and medical opinions must show that the veteran or servicemember on active duty has a permanent disability resulting from—

(i) Loss, or loss of use, of both lower extremities requiring the use of braces, crutches, canes, or a wheelchair to move from place to place;

(ii) Blindness in both eyes so that the veteran can see only light, together with the loss, or loss of use of one lower extremity;

(iii) Loss, or loss of use, of one lower extremity, together with a disease or injury that affects the veteran's balance or ability to move forward and requires the use of braces, crutches, canes, or a wheelchair in order to move from place to place;

(iv) Loss, or loss of use, of one lower extremity, together with loss or loss of use of one upper extremity that affects the veteran's balance or ability to move forward and requires the use of braces, crutches, canes, or a wheelchair in order to move from place to place;

(v) Loss, or loss of use, of both upper extremities that prevents the veteran from using the arms at or above the elbows; or

(vi) Severe burn injury.

(2) *Cause of disability.* Medical treatment records, medical opinions, or use of a legal presumption that the disability is related to a particular type of military service, such as detention as a prisoner of war, participation in a radiation-risk activity, or service in Vietnam or the Southwest Asia theater of operations during the Gulf War show that the veteran or servicemember suffered the disability as a result of—

(i) An injury, disease, or event in line of duty in the active military, naval or air service; or

(ii) VA hospital care, medical or surgical treatment or examination under circumstances involving VA carelessness, negligence, lack of proper skill or error in judgment or an event not reasonably foreseeable, or

(iii) VA training or rehabilitation services or participation in VA's compensated work therapy program.

(b) *Special Home Adaptation Grant.* For purposes of a claim for a special home adaptation grant—

(1) *Nature of disability.* Medical treatment records and medical opinions must show that the veteran or servicemember on active duty has a permanent disability resulting from—

(i) Blindness in both eyes with 5/200 visual acuity or less;

(ii) Anatomical loss or loss of use of both hands; or

(iii) Severe burn injury.

(2) *Cause of disability.* Information and evidence must show that the veteran or servicemember suffered the disability as a result of—

(i) An injury, disease, or event in line of duty in the active military, naval or air service;

(ii) VA hospital care, medical or surgical treatment or examination under circumstances involving VA carelessness, negligence, lack of proper skill or error in judgment or an event not reasonably foreseeable; or

(iii) VA training or rehabilitation services or participation in VA's compensated work therapy program.

(c) *Allowance for Automobile or Adaptive Equipment.* For purposes of a claim for an automobile allowance or adaptive equipment—(1) *Eligibility for Automobile allowance and adaptive equipment.* (i) *Nature of Disability.* Medical treatment records and medical opinions must show that the veteran is entitled to compensation for, or servicemember on active duty has, a current disability resulting from—

(A) The loss, or permanent loss of use, of at least a foot or a hand; or

(B) Permanent impairment of vision in both eyes, resulting in vision of 20/200 or less in the better eye with glasses or vision of 20/200 or better, if there is a severe defect in peripheral vision.

(ii) *Cause of disability.* Information and evidence must show that the

veteran or servicemember suffered the disability as a result of—

(A) An injury, disease, or event in line of duty in the active military, naval or air service;

(B) VA hospital care, medical or surgical treatment or examination under circumstances involving VA carelessness, negligence, or lack of proper skill or judgment or an event not reasonably foreseeable; or

(C) VA training or rehabilitation services or participation in VA's compensated work therapy program.

(2) *Eligibility for adaptive equipment only.* (i) *Nature of disability.* Medical treatment records and medical opinions must show that the veteran has a disability resulting from ankylosis of at least one knee or one hip.

(ii) *Cause of disability.* Information and evidence must show that the veteran suffered the disability as a result of—

(A) An injury, disease, or event in line of duty in the active military, naval or air service;

(B) VA hospital care, medical or surgical treatment or examination under circumstances involving VA carelessness, negligence, or lack of proper skill or error in judgment or an event not reasonably foreseeable; or

(C) VA training or rehabilitation services or participation in VA's compensated work therapy program.

(d) *Clothing Allowance.* For purposes of a claim for a clothing allowance—

(1) Information and evidence must show that the veteran suffered a disability as a result of—

(i) An injury, disease, or event in line of duty in the active military, naval or air service;

(ii) VA hospital care, medical or surgical treatment or examination under circumstances involving VA carelessness, negligence, lack of proper skill or error in judgment or an event not reasonably foreseeable; or

(iii) VA training or rehabilitation services or participation in VA's compensated work therapy program; and

(2) The veteran wears or uses a prosthetic or orthopedic appliance because the qualifying disability that tends to wear out or tear the veteran's clothing, or the veteran uses prescription medication for a skin condition which is due to a qualifying disability and the medication causes irreparable damage to the veteran's outer garments. This is based on a VA examination or hospital report or an examination report from a government or private facility.

(e) *Monetary allowance for individuals with spina bifida born to Vietnam veterans.* For purposes of a claim for a monetary allowance for an individual with spina bifida born to a Vietnam veteran—

(1) *Eligible individual.* A monetary allowance is payable to or for an individual, regardless of age or marital status if evidence such as service department records and a birth certificate, church record of baptism, affidavit or certified statement from a physician or midwife present during the individual's birth, or notarized copy of a Bible or other family record containing reference to the birth shows that—

(i) The individual's biological father or mother is or was a veteran who performed active military, naval, or air service in the Republic of Vietnam during the period beginning on January 9, 1962, and ending on May 7, 1975, including service in the waters offshore and service in other locations if the conditions of service involved duty or visitation in the Republic of Vietnam; and

(ii) The individual was conceived on or after the date on which the veteran first served in the Republic of Vietnam.

(2) *Spina bifida.* Medical treatment records and medical opinions must show that the individual has any form or manifestation of spina bifida except spina bifida occulta.

(3) *Extent of current disability.* VA will examine the nature and severity of the individual's disability due to spina bifida and assign an evaluation of Level 1 to Level 3 by comparing the individual's symptoms to the criteria in § 3.814. This may be based on medical treatment records and reports and statements from the individual's employer and other people about how the disability affects the individual's ability to work and function.

(f) *Monetary allowance for individuals with certain birth defects born to female Vietnam veterans.* For purposes of a claim for a monetary allowance for an individual with certain birth defects born to a female Vietnam veteran—

(1) *Eligible individual.* A monetary allowance is payable to or for an individual, regardless of age or marital status if evidence such as service department records and a birth certificate, church record of baptism, affidavit or certified statement from a physician or midwife present during the individual's birth, or notarized copy of a Bible or other family record containing reference to the birth shows that—

(i) The individual's biological mother is or was a veteran who performed active military, naval, or air service in the Republic of Vietnam during the period beginning February 28, 1961, and ending on May 7, 1975, including service in the waters offshore and service in other locations if the conditions of service involved duty or visitation in the Republic of Vietnam; and

(ii) The individual was conceived on or after the date on which the veteran first served in the Republic of Vietnam.

(2) *Covered birth defect.* Medical treatment records and medical opinions must show that the individual has any birth defect(s) identified by VA as a birth defect that is associated with service of women Vietnam veterans in the Republic of Vietnam during the Vietnam era.

(3) *Extent of current disability.* VA will examine the nature and severity of the individual's disability due to the birth defect(s) and assign an evaluation of Level 0 to Level 4 by comparing the individual's symptoms to the criteria in § 3.815. This may be based on medical treatment records and reports and statements from the individual's employer and other people about how the disability affects the individual's ability to work and function.

(Authority: 38 U.S.C. 5103(a)(1) and (2))

§ 3.165 Notice upon receipt of claim to reopen based on new and material evidence.

VA will provide notice that the following information and evidence is necessary to reopen a previously denied claim as provided in § 3.156 in addition to the notice described in §§ 3.159 through 3.164.

(a) New evidence is existing evidence not previously submitted to VA.

(b) Material evidence is existing evidence that, by itself or when considered with previous evidence of record, relates to an unestablished fact necessary to substantiate the claim.

(c) To be new and material, evidence must raise a reasonable possibility of substantiating the claim.

(Authority: 38 U.S.C. 5103(a)(1) and (2))

§ 3.166 Notice upon receipt of claim for other benefits governed by part 3.

Subject to § 3.159, if VA receives a claim for any benefit governed by part 3 of this title that is not otherwise addressed in §§ 3.160 through 3.164, VA will provide notice appropriate to the type of benefit sought describing the evidence and information necessary to substantiate the claim. Such notice shall be consistent with the statutory and regulatory eligibility criteria for the benefit.

(Authority: 38 U.S.C. 5103(a)(1) and (2))

§ 3.167 VA's duty to assist claimants in obtaining evidence.

(a) *Definitions.* For purposes of this section, the following definitions apply:

(1) *Competent medical evidence* means evidence provided by a person who is qualified through education, training, or experience to offer medical diagnoses, statements, or opinions. Competent medical evidence may also mean statements conveying sound medical principles found in medical treatises. It would also include statements contained in authoritative writings such as medical and scientific articles and research reports or analyses.

(2) *Competent lay evidence* means any evidence not requiring that the proponent have specialized education, training, or experience. Lay evidence is competent if it is provided by a person who has knowledge of facts or circumstances and conveys matters that can be observed and described by a lay person.

(3) *Event* means one or more incidents associated with places, types, and circumstances of service giving rise to disability.

(b) Upon receipt of a substantially complete application for benefits, VA will make reasonable efforts to help a claimant obtain evidence necessary to substantiate the claim. In addition, VA will give the assistance described in paragraphs (b)(1), (b)(2), and (b)(3) of this section to an individual attempting to reopen a finally decided claim. VA will not pay any fees charged by a custodian to provide records requested.

(1) *Obtaining records not in the custody of a Federal department or agency.* VA will make reasonable efforts to obtain relevant records not in the custody of a Federal department or agency, to include records from State or local governments, private medical care providers, current or former employers, and other non-Federal governmental sources. Such reasonable efforts will generally consist of an initial request for the records and, if the records are not received, at least one follow-up request. A follow-up request is not required if a response to the initial request indicates that the records sought do not exist or that a follow-up request for the records would be futile. If VA receives information showing that subsequent requests to this or another custodian could result in obtaining the records sought, then reasonable efforts will include an initial request and, if the records are not received, at least one follow-up request to the new source or an additional request to the original source.

(i) The claimant must cooperate fully with VA's reasonable efforts to obtain relevant records from non-Federal agency or department custodians. The claimant must provide enough information to identify and locate the existing records, including the person, company, agency, or other custodian holding the records; the approximate time frame covered by the records; and, in the case of medical treatment records, the condition for which treatment was provided.

(ii) If necessary, the claimant must authorize the release of existing records in a form acceptable to the person, company, agency, or other custodian holding the records.

(Authority: 38 U.S.C. 5103A(b))

(2) *Obtaining records in the custody of a Federal department or agency.* VA will make as many requests as are necessary to obtain relevant records from a Federal department or agency. These records include but are not limited to military records, including service medical records; medical and other records from VA medical facilities; records from non-VA facilities providing examination or treatment at VA expense; and records from other Federal agencies, such as the Social Security Administration. VA will end its efforts to obtain records from a Federal department or agency only if VA concludes that the records sought do not exist or that further efforts to obtain those records would be futile. Cases in which VA may conclude that no further efforts are required include those in which the Federal department or agency advises VA that the requested records do not exist or the custodian does not have them.

(i) The claimant must cooperate fully with VA's reasonable efforts to obtain relevant records from Federal agency or department custodians. If requested by VA, the claimant must provide enough information to identify and locate the existing records, including the custodian or agency holding the records; the approximate time frame covered by the records; and, in the case of medical treatment records, the condition for which treatment was provided. In the case of records requested to corroborate a claimed stressful event in service, the claimant must provide information sufficient for the records custodian to conduct a search of the corroborative records.

(ii) If necessary, the claimant must authorize the release of existing records in a form acceptable to the custodian or agency holding the records.

(Authority: 38 U.S.C. 5103A(b))

(3) *Obtaining records in compensation claims.* In a claim for disability compensation, VA will make efforts to obtain the claimant's service medical records, if relevant to the claim; other relevant records pertaining to the claimant's active military, naval or air service that are held or maintained by a governmental entity; VA medical records or records of examination or treatment at non-VA facilities authorized by VA; and any other relevant records held by any Federal department or agency. The claimant must provide enough information to identify and locate the existing records including the custodian or agency holding the records; the approximate time frame covered by the records; and, in the case of medical treatment records, the condition for which treatment was provided.

(Authority: 38 U.S.C. 5103A(c))

(4) *Providing medical examinations or obtaining medical opinions.*

(i) In a claim for disability compensation, VA will provide a medical examination or obtain a medical opinion based upon a review of the evidence of record if VA determines it is necessary to decide the claim. A medical examination or medical opinion is necessary if the information and evidence of record does not contain sufficient competent medical evidence to decide the claim, but:

(A) Contains competent lay or medical evidence of a current diagnosed disability or persistent or recurrent symptoms of disability;

(B) Establishes that the veteran suffered an event, injury or disease in service, or has a disease or symptoms of a disease listed in §§ 3.309, 3.313, 3.316, and 3.317 manifesting during an applicable presumptive period provided the claimant has the required service or triggering event to qualify for that presumption; and

(C) Indicates that the claimed disability or symptoms may be associated with the established event, injury, or disease in service or with another service-connected disability.

(ii) Paragraph (b)(4)(i)(C) of this section could be satisfied by competent evidence showing post-service treatment for a condition, or other possible association with military service.

(iii) Paragraph (b)(4) of this section applies to a claim to reopen a finally adjudicated claim only if new and material evidence is presented or secured.

(Authority: 38 U.S.C. 5103A(d))

(c) *Circumstances where VA will refrain from or discontinue providing assistance.* VA will refrain from

providing assistance in obtaining evidence for a claim if the substantially complete application for benefits indicates that there is no reasonable possibility that any assistance VA would provide to the claimant would substantiate the claim. VA will discontinue providing assistance in obtaining evidence for a claim if the evidence obtained indicates that there is no reasonable possibility that further assistance would substantiate the claim. Circumstances in which VA will refrain from or discontinue providing assistance in obtaining evidence include, but are not limited to:

(1) The claimant's ineligibility for the benefit sought because of lack of qualifying service or other lack of legal eligibility;

(2) Claims that are inherently incredible or clearly lack merit; and

(3) An application requesting a benefit to which the claimant is not entitled as a matter of law.

(Authority: 38 U.S.C. 5103A(a)(2))

(d) *Duty to notify claimant of inability to obtain records.*

(1) If VA makes reasonable efforts to obtain relevant non-Federal records but is unable to obtain them, or after continued efforts to obtain Federal records concludes that it is reasonably certain they do not exist or further efforts to obtain them would be futile, VA will provide the claimant with oral or written notice of that fact. VA will make a record of any oral notice conveyed to the claimant. For non-Federal records requests, VA may provide the notice at the same time it makes its final attempt to obtain the relevant records. In either case, the notice must contain the following information:

(i) The identity of the records VA was unable to obtain;

(ii) An explanation of the efforts VA made to obtain the records;

(iii) A description of any further action VA will take regarding the claim, including, but not limited to, notice that VA will decide the claim based on the evidence of record unless the claimant submits the records VA was unable to obtain; and

(iv) A notice that the claimant is ultimately responsible for providing the evidence.

(2) If VA becomes aware of the existence of relevant records before deciding the claim, VA will notify the claimant of the records and request that the claimant provide a release for the records. If the claimant does not provide any necessary release of the relevant records that VA is unable to obtain, VA will request that the claimant obtain the records and provide them to VA.

(Authority: 38 U.S.C. 5103A(b)(2))

(e) The authority recognized in subsection (g) of 38 U.S.C. 5103A is reserved to the sole discretion of the Secretary and will be implemented, when deemed appropriate by the Secretary, through the promulgation of regulations.

(Authority: 38 U.S.C. 5103A(g))

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 82

[EPA–HQ–OAR–2009–0566; FRL–9091–6]

RIN–2060–AP59

Protection of Stratospheric Ozone: Allocation of Essential Use Allowances for Calendar Year 2010

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to allocate essential use allowances for import and production of Class I ozone-depleting substances (ODSs) for calendar year 2010. Essential use allowances enable a person to obtain controlled Class I ODSs through an exemption to the regulatory ban on the production and import of these chemicals, which became effective as of January 1, 1996. EPA allocates essential use allowances for production or import of a specific quantity of Class I substances solely for the designated essential purpose. The proposed allocation in this action is 30.0 metric tons (MT) of chlorofluorocarbons (CFCs) for use in metered dose inhalers (MDIs) for 2010.

DATES: Written comments on this proposed rule must be received by the EPA Docket on or before January 11, 2010, unless a public hearing is requested. Comments must then be received on or before 30 days following the public hearing. Any party requesting a public hearing must notify the contact listed below under **FOR FURTHER INFORMATION CONTACT** by 5 p.m. Eastern Standard Time on December 16, 2009. If a hearing is held, it will take place on December 28, 2009 at EPA headquarters in Washington, DC. EPA will post a notice on our Web site (*http://www.epa.gov/ozone/strathome.html*) announcing further information on the hearing if it is requested.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2009–0566, by one of the following methods:

- *http://www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *E-mail: A-and-R-docket@epa.gov.*
- *Fax:* 202–566–9744.
- *Mail:* Air Docket, Environmental Protection Agency, Mailcode 2822T, 1200 Pennsylvania Ave., NW., Washington, DC 20460.
- *Hand Delivery or Courier:* Deliver your comments to: EPA Air Docket, EPA West, 1301 Constitution Avenue, NW., Room 3334, Mail Code 2822T, Washington, DC 20460. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–HQ–OAR–2009–0566. EPA's policy is that all comments received by the docket will be included in the public docket without change and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information through *http://www.regulations.gov* or e-mail that you consider to be CBI or otherwise protected. If you would like the Agency to consider comments that include CBI, EPA recommends that you submit the comments to the docket that exclude the CBI portion but that you provide a complete version of your comments, including the CBI, to the person listed under **FOR FURTHER INFORMATION CONTACT** below. The *http://www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through *http://www.regulations.gov* your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of

special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket, visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.*

Docket: All documents in the docket are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *http://www.regulations.gov* or in hard copy at the Air Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. This Docket Facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: Jennifer Bohman, by regular mail: U.S. Environmental Protection Agency, Stratospheric Protection Division (6205J), 1200 Pennsylvania Avenue, NW., Washington, DC 20460; by courier service or overnight express: 1301 L Street, NW., Room 1047A, Washington, DC 20005; by telephone: (202) 343–9548; or by e-mail: *bohman.jennifer@epa.gov.*

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I. General Information

A. What should I consider when preparing my comments?

1. *Confidential Business Information.* Do not submit this information to EPA through *http://www.regulations.gov* or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for Preparing Your Comments.* When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number). Follow directions—The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified.

II. Basis for Allocating Essential Use Allowances

A. What are essential use allowances?

Essential use allowances are allowances to produce or import certain ozone depleting substances (ODSs) in the U.S. for purposes that have been deemed ''essential'' by the U.S. Government and by the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol).

The Montreal Protocol is the international agreement aimed at reducing and eliminating the production and consumption [1] of ODSs. The elimination of production and consumption of Class I ODSs is accomplished through adherence to phaseout schedules for specific Class I ODSs,[2] which include CFCs, halons, carbon tetrachloride, and methyl chloroform. As of January 1, 1996, production and import of most Class I ODSs were phased out in developed countries, including the United States.

However, the Montreal Protocol and the Clean Air Act (the Act) provide exemptions that allow for the continued import and/or production of Class I ODSs for specific uses. Under the Montreal Protocol, exemptions may be granted for uses that are determined by the Parties to be ''essential.'' Decision IV/25, taken by the Parties to the Protocol in 1992, established criteria for determining whether a specific use should be approved as essential, and set forth the international process for making determinations of essentiality. The criteria for an essential use, as set forth in paragraph 1 of Decision IV/25, are the following:

''(a) That a use of a controlled substance should qualify as 'essential' only if:

(i) It is necessary for the health, safety or is critical for the functioning of society (encompassing cultural and intellectual aspects); and

(ii) There are no available technically and economically feasible alternatives or substitutes that are acceptable from the standpoint of environment and health;

(b) That production and consumption, if any, of a controlled substance for essential uses should be permitted only if:

(i) All economically feasible steps have been taken to minimize the essential use and any associated emission of the controlled substance; and

(ii) The controlled substance is not available in sufficient quantity and quality

[1] ''Consumption'' is defined as the amount of a substance produced in the United States, plus the amount imported into the United States, minus the amount exported to Parties to the Montreal Protocol (*see* Section 601(6) of the Clean Air Act).

[2] Class I ozone depleting substances are listed at 40 CFR part 82, subpart A, appendix A.

from existing stocks of banked or recycled controlled substances, also bearing in mind the developing countries' need for controlled substances.''

B. Under what authority does EPA allocate essential use allowances?

Title VI of the Act implements the Montreal Protocol for the United States.[3] Section 604(d) of the Act authorizes EPA to allow the production of limited quantities of Class I ODSs after the phaseout date for the following essential uses:

(1) Methyl Chloroform, ''solely for use in essential applications (such as nondestructive testing for metal fatigue and corrosion of existing airplane engines and airplane parts susceptible to metal fatigue) for which no safe and effective substitute is available.'' Under section 604(d)(1) of the Act, this exemption was available only until January 1, 2005. Prior to that date, EPA issued methyl chloroform allowances to the U.S. Space Shuttle and Titan Rocket programs.

(2) Medical devices (as defined in section 601(8) of the Act), ''if such authorization is determined by the Commissioner [of the Food and Drug Administration], in consultation with the Administrator [of EPA] to be necessary for use in medical devices.'' EPA issues allowances to manufacturers of MDIs that use CFCs as propellant for the treatment of asthma and chronic obstructive pulmonary disease.

(3) Aviation safety, for which limited quantities of halon-1211, halon-1301, and halon-2402 may be produced ''if the Administrator of the Federal Aviation Administration, in consultation with the Administrator [of EPA] determines that no safe and effective substitute has been developed and that such authorization is necessary for aviation safety purposes.'' Neither EPA nor the Parties have ever granted a request for essential use allowances for halon, because alternatives are available or because existing quantities of this substance are large enough to provide for any needs for which alternatives have not yet been developed.

An additional essential use exemption under the Montreal Protocol, as agreed in Decision X/19, is the general exemption for laboratory and analytical uses. This exemption is reflected in EPA's regulations at 40 CFR part 82, subpart A. While the Act does not specifically provide for this exemption, EPA has determined that an exemption for essential laboratory and analytical uses is allowable under the Act as a *de minimis* exemption. The *de minimis* exemption is addressed in EPA's final rule of March 13, 2001 (66 FR 14760–14770). The Parties to the Protocol subsequently agreed (Decision XI/15) that the general exemption does not apply to the following uses: testing of oil and grease, and total petroleum hydrocarbons in water; testing of tar in road-paving materials; and forensic finger-printing. EPA incorporated this exemption at Appendix G to Subpart A of 40 CFR part 82 on February 11, 2002 (67 FR 6352). In a December 29, 2005, final rule, EPA extended the general exemption for laboratory and analytical uses through December 31, 2007 (70 FR 77048), in accordance with Decision XV/8 of the Parties to the Protocol. At the 19th Meeting of the Parties in September 2007, the Parties agreed to extend the global laboratory and analytical use exemption through December 31, 2011, in Decision XIX/18. In a December 27, 2007, final rulemaking EPA took action to (1) extend the laboratory and analytical use exemption from December 31, 2007, to December 31, 2011, for specific laboratory uses, (2) apply the laboratory and analytical use exemption to the production and import of methyl bromide, and (3) eliminate the testing of organic matter in coal from the laboratory and analytical use exemption (72 FR 73264).

C. What is the process for allocating essential use allowances?

The procedure set out by Decision IV/25 calls for individual Parties to nominate essential uses and the total amount of ODSs needed for those essential uses on an annual basis. The Protocol's Technology and Economic Assessment Panel (TEAP) evaluates the nominated essential uses and makes recommendations to the Parties. The Parties make the final decisions on whether to approve a Party's essential use nomination at their annual meeting. This nomination process occurs approximately two years before the year in which the allowances would be in effect. The allowances proposed for allocation for 2010 were first nominated by the United States in January 2008.

For MDIs, EPA requests information from manufacturers about the number and type of MDIs they plan to produce, as well as the amount of CFCs necessary for production. EPA then forwards the information to the Food and Drug Administration (FDA), which determines the amount of CFCs necessary for MDIs in the coming calendar year. Based on FDA's determination, EPA proposes allocations to each eligible entity. Under the Act and the Montreal Protocol, EPA may allocate essential use allowances in quantities that together are below or equal to the total amount approved by the Parties. EPA will not allocate essential use allowances in amounts higher than the total approved by the Parties. For 2010, the Parties authorized the United States to allocate up to 92 MT of CFCs for essential uses.

III. Essential Use Allowances for Medical Devices

The following is a step-by-step list of actions EPA and FDA have taken thus far to implement the exemption for medical devices found at section 604(d)(2) of the Act for the 2010 calendar year.

1. On January 7, 2009, EPA sent letters to MDI manufacturers requesting the following information under section 114 of the Act (''114 letters''):

a. The MDI product where CFCs will be used.

b. The number of units of each MDI product produced from 1/1/08 to 12/31/08.

c. The number of units anticipated to be produced in 2009.

d. The number of units anticipated to be produced in 2010.

e. The gross target fill weight per unit (grams).

f. Total amount of CFCs to be contained in the MDI product for 2010.

g. The additional amount of CFCs necessary for production.

h. The total CFC request per MDI product for 2010.

The 114 letters are available for review in the Air Docket ID No. EPA–HQ–OAR–2009–0566. The companies requested that their responses be treated as confidential business information; for this reason, EPA has placed the responses in the confidential portion of the docket.

2. At the end of January 2009, as required by 40 CFR 82.13(u), EPA received information from MDI manufacturers that included such data as the type and quantity of CFCs held at the end of the year (i.e. stocks of pre-1996 and post-1996 CFCs). The data submitted from the MDI manufacturers is available for review in the Air Docket ID No. EPA–HQ–OAR–2009–0566. The companies requested that their individual responses be treated as confidential business information; for this reason, EPA has placed the individual responses in the confidential portion of the docket.

3. On April 1, 2009, EPA sent FDA the information MDI manufacturers provided in response to the 114 letters and information required by 40 CFR

[3] *See* Section 614(b) of the Act. EPA's regulations implementing the essential use provisions of the Act and the Protocol are located in 40 CFR part 82.

82.13(u) with a letter requesting that FDA make a determination regarding the amount of CFCs necessary for MDIs for calendar year 2010. This letter is available for review in Air Docket ID No. EPA–HQ–OAR–2009–0566.

4. On July 10, 2009, FDA sent a letter to EPA stating the amount of CFCs determined by the Commissioner to be necessary for each MDI company in 2010. This letter is available for review in the Air Docket ID No. EPA–HQ–OAR–2009–0566. FDA's letter informed EPA that it had determined that 30.0 MT of CFCs were necessary for use in medical devices in the year 2010.

With respect to the 2010 determination, FDA stated, ''Our determination for the allocation of CFCs is lower than the total amount requested by manufacturers. In reaching this estimate, we took into account the sponsors' production of MDIs that used CFCs as a propellant in 2008, their estimated production in 2009, their estimated production in 2010, their anticipated essential-use allocations in 2009, and their current (as of December 31, 2008) stockpile levels. Our determination took into account any transferred CFCs as well as pre-1996 CFC amounts. Finally, we based our determination for 2010 on an estimate of the quantity of CFCs that would allow manufacturers to have adequate stockpiles at the end of 2010 consistent with the principles in paragraph 3 of Decision XVI/12 and paragraph 2 of Decision XVII/5.''

The letter stated that in making its determination, FDA made the following assumptions:

- All manufacturers will receive the full essential-use allocation proposed by EPA for calendar year 2009 (74 FR 2954, January 16, 2009);
- All manufacturers will procure the full quantity of CFCs allocated to them for 2009; and
- No bulk CFCs currently held by, or allocated to, any manufacturer will be exported from the United States.

EPA has confirmed with FDA that this determination is consistent with Decision XVII/5, including language on stocks that states that Parties ''shall take into account pre- and post-1996 stocks of controlled substances as described in paragraph 1(b) of Decision IV/25, such that no more than a one-year operational supply is maintained by that manufacturer.'' Allowing manufacturers to maintain up to a one-year operational supply accounts for unexpected variability in the demand for MDI products or other unexpected occurrences in the market and therefore ensures that MDI manufacturers are able to produce their essential use MDIs.

In accordance with the FDA determination, today's action proposes to allocate essential use allowances for a total of 30.0 MT of CFCs for use in MDIs for calendar year 2010.

The amounts listed in this proposal are subject to additional review and revision by EPA and FDA if information demonstrates that the proposed allocations are either too high or too low. We specifically request comment on the extent to which the proposed allocation of CFCs is sufficient to protect public health and ensure the manufacture and continuous availability of CFCs necessary to meet the expected demand. We also request comment on whether the proposed allocation, when considered along with current stocks, will best protect consumers by providing a smooth transition to non-CFC alternatives. Commenters requesting increases or decreases of essential use allowances should provide detailed information supporting a claim for additional or fewer CFCs. Any company that needs less than the full amount listed in this proposal should notify EPA of the actual amount needed.

IV. Proposed Allocation of Essential Use Allowances for Calendar Year 2010

TABLE I—ESSENTIAL USE ALLOWANCES FOR CALENDAR YEAR 2010

Company	Chemical	2010 Quantity (metric tons)
(i) Metered Dose Inhalers (for oral inhalation) for Treatment of Asthma and Chronic Obstructive Pulmonary Disease		
Armstrong	CFC–11 or CFC–12 or CFC–114	30.0

EPA proposes to allocate essential use allowances for calendar year 2010 to the entity listed in Table I. These allowances are for the production or import of the specified quantity of Class I controlled substances solely for the specified essential use.

V. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order (EO) 12866 (58 FR 51735, October 4, 1993), this action is a ''significant regulatory action'' because it raises novel legal or policy issues. Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under EO 12866 and any changes made in response to OMB recommendations have been documented in the docket for this action.

EPA prepared an analysis of the potential costs and benefits related to this action. This analysis is contained in the Agency's Regulatory Impact Analysis (RIA) for the entire Title VI phaseout program (U.S. Environmental Protection Agency, ''Regulatory Impact Analysis: Compliance with Section 604 of the Clean Air Act for the Phaseout of Ozone Depleting Chemicals,'' July 1992). A copy of the analysis is available in the docket for this action and the analysis is briefly summarized here. The RIA examined the projected economic costs of a complete phaseout of consumption of ozone-depleting substances, as well as the projected benefits of phased reductions in total emissions of CFCs and other ozone-depleting substances, including essential use CFCs used for MDIs.

B. Paperwork Reduction Act

This action does not impose any new information collection burden. The recordkeeping and reporting requirements included in this action are already included in an existing information collection burden and this action does not propose any changes that would affect the burden. The Office of Management and Budget (OMB) has previously approved the information collection requirements contained in the existing regulations at 40 CFR 82.8(a) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2060–0170. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis of any

rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impact of today's proposed rule on small entities, small entity is defined as: (1) A small business that is primarily engaged in pharmaceutical preparations manufacturing as defined by NAICS code 325412 with less than 750 employees; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant its field.

After considering the economic impacts of today's proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. In determining whether a rule has a significant economic impact on a substantial number of small entities, the impact of concern is any significant *adverse* economic impact on small entities, since the primary purpose of the regulatory flexibility analyses is to identify and address regulatory alternatives ''which minimize any significant economic impact of the rule on small entities.'' 5 USC 603 and 604. Thus, an agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, or otherwise has a positive economic effect on all of the small entities subject to the rule.

This proposed action will provide an otherwise unavailable benefit to those companies that are receiving essential use allowances by creating an exemption to the regulatory phaseout of chlorofluorocarbons. We have therefore concluded that today's proposed rule will relieve regulatory burden for all small entities. We continue to be interested in the potential impact of the proposed rule on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

This action contains no Federal mandates under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for State, local, or tribal governments or the private sector. The action imposes no enforceable duty on any State, local or tribal governments or the private sector. This action does not impose any new requirements on any entities. Therefore, this action is not subject to the requirements of sections 202 and 205 of the UMRA. This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments because this rule merely allocates essential use allowances to entities under an exemption to the ban on production and import of Class I ODSs.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This action merely allocates essential use allowances to entities under an exemption to the ban on production and import of Class I ODSs. Thus, Executive Order 13132 does not apply to this rule.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicits comment on this proposed action from State and local officials.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). This action merely allocates essential use allowances to entities under an exemption to the ban on production and import of Class I ODSs. This action does not impose substantial direct compliance costs on Indian tribal governments. Thus, Executive Order 13175 does not apply to this action. EPA specifically solicits additional comment on this proposed action from tribal officials.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

EPA interprets EO 13045 as applying to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the Order has the potential to influence the regulation. This proposed rule is not subject to EO 13045 because it implements Section 604(d)(2) of the Clean Air Act which states that the Agency shall authorize essential use exemptions should the Food and Drug Administration determine that such exemptions are necessary.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This action is not a ''significant energy action'' as defined in Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. This action merely allocates essential use allowances to entities under an exemption to the ban on production and import of Class I ODSs.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (''NTTAA''), Public Law 104–113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards. This proposed rule does not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order (EO) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has concluded that it is not practicable to determine whether there would be disproportionately high and adverse human health or environmental

effects on minority and/or low income populations from this proposed rule. EPA believes, however, that this action affects the level of environmental protection equally for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. Any ozone depletion that results from this proposed rule will impact all affected populations equally because ozone depletion is a global environmental problem with environmental and human effects that are, in general, equally distributed across geographical regions.

List of Subjects in 40 CFR Part 82

Environmental protection, Administrative practice and procedure, Air pollution control, Chemicals, Chlorofluorocarbons, Imports, Methyl Chloroform, Ozone, Reporting and recordkeeping requirements.

Dated: December 7, 2009.

Lisa P. Jackson,

Administrator.

40 CFR part 82 is proposed to be amended as follows:

PART 82—PROTECTION OF STRATOSPHERIC OZONE

1. The authority citation for part 82 continues to read as follows:

Authority: 42 U.S.C. 7414, 7601, 7671–7671q.

Subpart A—Production and Consumption Controls

2. Section 82.8 is amended by revising the table in paragraph (a) to read as follows:

§ 82.8 Grant of essential use allowances and critical use allowances.

(a) * * *

TABLE I—ESSENTIAL USE ALLOWANCES FOR CALENDAR YEAR 2010

Company	Chemical	2010 quantity (metric tons)
(i) Metered Dose Inhalers (for oral inhalation) for Treatment of Asthma and Chronic Obstructive Pulmonary Disease		
Armstrong	CFC–11 or CFC–12 or CFC–114	30.0

* * * * *

[FR Doc. E9–29556 Filed 12–10–09; 8:45 am]
BILLING CODE 6560–50–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 600

[Docket No. 0808041047–9114–02]

RIN 0648–AW62

Magnuson-Stevens Act Provisions; National Standard 2—Scientific Information

AGENCY: National Marine Fisheries Service (NMFS); National Oceanic and Atmospheric Administration (NOAA); Commerce.

ACTION: Proposed rule; request for comments.

SUMMARY: NMFS proposes revisions to the guidelines for National Standard 2 (NS2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) regarding scientific information. This action is necessary to provide guidance on the use of best scientific information available (BSIA) for the effective conservation and management of the nation's marine living resources. NMFS proposes to modify the existing NS2 guidelines on BSIA and establish new guidelines for scientific peer review to ensure the reliability, credibility, and integrity of the scientific information used in fishery conservation and management measures. Further, NMFS is proposing to add language to the guidelines regarding the role of the Scientific and Statistical Committees (SSCs) of the Regional Fishery Management Councils (Councils), and the relationship of SSCs to the peer review process. The proposed NS2 guidelines will also clarify the content and purpose of the Stock Assessment and Fishery Evaluation (SAFE) Report and related documents. These actions are necessary to ensure the use of BSIA in the development of fishery management plans and plan amendments, as required by NS2 of the MSA. The intended effect of these actions is to ensure that scientific information, including its collection and analysis, has been validated through formal peer review or other appropriate review, is transparent, and is used appropriately by SSCs, Councils, and NMFS in the conservation and management of marine fisheries. These guidelines are designed to provide quality standards for the collection and provision of biological, ecological, economic, and sociological information to fishery managers, Councils, and the public, while recognizing regional differences in fisheries and their management.

DATES: Written comments must be received by March 11, 2010.

ADDRESSES: You may submit comments, identified by 0648–AW62, by any one of the following methods:

- *Electronic Submissions:* Submit all electronic comments via the Federal eRulemaking Portal *http://www.regulations.gov.*
- *Fax:* Attn: William Michaels 301–713–1875.
- *Mail:* William Michaels, NOAA Fisheries Service, Office of Science and Technology, F/ST4, 1315 East-West Highway, Silver Spring, MD 20910.

Instructions: No comments will be posted for public viewing until after the comment period has closed. All comments received are a part of the public record and will generally be posted to *http://www.regulations.gov* without change. All personal identifying information (for example, name address, etc.) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

NMFS will accept anonymous comments (enter N/A in the required fields if you wish to remain anonymous). Attachments to electronic comments will be accepted in Microsoft Word, Excel, WordPerfect, or Adobe PDF file formats only.

FOR FURTHER INFORMATION CONTACT: William Michaels, 301–713–2363 x136.

SUPPLEMENTARY INFORMATION:

I. Overview of Proposed Revisions to the Guidelines for National Standard 2

Section 301(a)(2) of the MSA specifies that fishery conservation and management measures shall be based upon the best scientific information available. Section 301(b) of the MSA states that ''the Secretary (of Commerce) shall establish advisory guidelines

(which shall not have the force and effect of law), based on national standards, to assist in the development of fishery management plans.'' The existing national standard guidelines appear at 50 CFR 600.310 through 600.355. The Magnuson-Stevens Fishery Conservation and Management Reauthorization Act (MSRA) of 2006 included provisions to improve the use of science in decisionmaking, provide a stronger role for Councils' SSCs, and establish an optional peer review process for scientific information used to advise Councils about conservation and management of fisheries. Therefore, NMFS is proposing revisions to the NS2 guidelines to address these MSA provisions and provide guidance and recommendations on peer review processes. NMFS published an advanced notice of proposed rulemaking (ANPR) in the **Federal Register** on September 18, 2008 (73 FR 54132). NMFS has carefully considered the public comments received in developing this proposed rule.

II. Major Components of the Proposed Action

A. Best Scientific Information Available (BSIA)

In 2004, the National Research Council (NRC) of the National Academies examined the application of the BSIA standard in the development of fishery conservation and management measures. The NRC recommended approaches to more uniformly apply the BSIA standard for current and future fishery management actions. The NRC recommendations are available in the NRC (2004) publication entitled ''Improving the Use of the 'Best Scientific Information Available' Standard in Fisheries Management'' (2004, *http://books.nap.edu/openbook.php*).

NMFS proposes that the 2004 NRC recommendations regarding the use of BSIA for fishery management should be incorporated to the extent possible in this proposed revision to the NS2 guidance. The ANPR comments provided a nearly unanimous recommendation that the NS2 guidelines be revised to incorporate the NRC recommendations, and that an overly prescriptive definition of BSIA should be avoided due to the dynamic nature of science. Therefore, as recommended by the NRC, the proposed NS2 guideline revisions are based on the following widely accepted principles for evaluating BSIA: Relevance, inclusiveness, objectivity, transparency, timeliness, verification, validation, and peer review of fishery management information as appropriate. NMFS also agrees with the comments that the NS2 guidelines should not prescribe a static definition of BSIA because of the dynamic developments inherent in making improvements in scientific information for fishery management.

The availability of scientific information to inform fisheries management varies. Ecosystems and human societies are complex, interacting, dynamic systems that are impacted by multiple factors, including those within the scope of fisheries management. Some fisheries are well studied and have much information from long-term annual research surveys and comprehensive biological, social, and economic fisheries data collection programs. Other fisheries do not have the same breadth of information available. In light of this variability, the proposed NS2 guideline revisions elevate the importance of evaluating the uncertainty and associated risk of the scientific information used to help inform fishery management decisions.

Similarly, the time available to review scientific information and the importance of that information to fishery management decisions are also variable. As a general rule, substantial management alternatives considered by a Council should be peer reviewed, but in some cases, formal peer review may not be possible due to time and resource constraints. For example, Councils may request that a NMFS Science Center provide calculations or analyses used in the development and assessment of fishery management alternatives for area-based or time-based harvest limits. It may be impractical to submit that scientific information to a formal peer review due to time and resource constraints. However, the development of such scientific information should be in accordance with the principles of transparency and openness set forth in this proposed action.

The proposed NS2 guidelines provide guidance that is fundamental for the reliability and integrity of scientific information to be used by NMFS and the Councils to effectively manage and conserve our nation's living marine resources.

B. Peer Review Processes

Pursuant to its authority under the Information Quality Act (Pub. L. 106–554, Section 515), the Office of Management and Budget (OMB) issued a Final Information Quality Bulletin for Peer Review (70 FR 2664, January 14, 2005) that establishes minimum peer review requirements for ''influential scientific information'' disseminated by Federal agencies. As described in section II.C, a Council's SSC is responsible for providing ongoing scientific advice to its Council for fishery management decisions. However, section 302(g)(1)(E) of the MSA provides for an optional peer review process: ''(T)he Secretary and each Council may establish a peer review process for that Council for scientific information used to advise the Council about the conservation and management of the fishery.'' If the Secretary and a Council establish such a process, it will be deemed to satisfy the requirements of the Information Quality Act, including the OMB Peer Review Bulletin guidelines. This proposed action provides guidance and national quality standards that are widely accepted, which should be followed in order to establish a peer review process per section 302(g)(1)(E). This action provides flexibility to maintain existing peer review processes established by the Secretary and Councils and also clarifies the role of the Councils' SSCs in the scientific review process.

Section 302(g)(1)(E) peer review processes must be carefully designed to maximize the likelihood of an outcome that is objective, provides useful information, and meets the intent or scope of work of the particular process. This proposed action adopts many of the OMB peer review standards, including balance in the peer review process in terms of expertise, knowledge, and bias; lack of conflicts of interest; independence from the work being reviewed; and transparency of the process. A peer review may take many forms, including individual letter or written review or panel reviews. The amount of time and resources spent on any particular review may depend on the novelty and complexity of the scientific information being reviewed. Peer reviewers who are federal employees must comply with all applicable federal ethics requirements (available at: *http://www.usoge.gov/federal_employees.aspx*). Potential reviewers who are not federal employees must be screened for conflicts of interest in accordance with the procedures set forth in the NOAA Policy on Conflicts of Interest for Peer Review subject to OMB's Peer Review Bulletin (available at: *http://www.cio.noaa.gov/Policy_Programs/NOAA_PRB_COI_Policy_110606.html*). The nature and scope of each peer review should be developed and defined prior to the selection of reviewers, to ensure reviewers with the

appropriate expertise and skills are selected.

Peer review processes established by the Secretary and a Council for that Council should not be duplicative and should focus on providing review for information that has not already undergone rigorous peer review. When the Secretary and a Council develop a peer review process per MSA section 302(g)(1)(E), the proposed NS2 guidelines provide that they must publish a notice and brief description of the process in the **Federal Register,** make a complete, detailed description of the process publicly available on the Council's Web site, and update it as necessary.

The proposed NS2 guidelines are not intended to replace or result in the duplication of effective peer review processes that have already been established by NMFS and the Councils, such as the Stock Assessment Review Committee (SARC), Southeast Data Assessment Review (SEDAR), Stock Assessment Review (STAR), and Western Pacific Stock Assessment Review (WPSAR). Section 302(g)(1)(E) provides that the peer review process established by the Secretary and a Council may include existing committees or panels. The aforementioned existing peer review processes (SARC, SEDAR, STAR and WPSAR) may qualify as 302(g)(1)(E) review processes, but the Secretary, in conjunction with the relevant Councils, has not yet made that determination. If such a determination is made, the Secretary will announce the decision in the **Federal Register.**

The impact of the proposed action on current Council peer review practices should be minimal since the proposed peer review standards are consistent with OMB's policy and presently incorporated in the existing peer review processes established by the Secretary and Councils. However, it may be necessary to refine those existing review processes in accordance with these proposed guidelines.

C. The Role of the SSC in the Review of Scientific Information

The proposed NS2 guidelines address several roles of the SSC and/or SSC members: the SSC as scientific advisor to its Council; the SSC as a peer review panel; and SSC members' participation on other peer review panels. With regard to the advisory role, the proposed NS2 guidelines provide that the SSCs are the scientific advisory bodies to the Councils.

Section 302(g)(1)(A) of the MSA mandates that ''Each Council shall establish, maintain, and appoint the members of a scientific and statistical committee to assist it in the development, collection, evaluation, and peer review of such statistical, biological, economic, social, and other scientific information as is relevant to such Council's development and amendment of any fishery management plan.'' As stated in MSA section 302(g)(1)(B), each SSC ''shall provide its Council ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield, and achieving rebuilding targets, and reports on stock status and health, bycatch, habitat status, social and economic impacts of management measures, and sustainability of fishing practices.''

Questions have arisen with regard to the role of the SSC and peer review process under MSA section 302(h)(6). That section states that ''each Council shall * * * develop annual catch limits for each of its managed fisheries that may not exceed the fishing level recommendations of its scientific and statistical committee or the peer review process established under subsection (g).'' A possible interpretation of this section is that a Council could not exceed the fishing level recommendation of either the SSC or peer review process; the lower of the two levels would be the limit. However, NMFS believes that section 302(h)(6) should not be interpreted so as to displace the SSC's role in providing advice and recommendations to the Council. While MSA provides for establishment of peer review processes, such processes are optional, and as noted above, MSA section 302(g)(1)(A)–(B) mandates the types of advice the SSC provides for fishery management decisions. Further, as a practical matter, it is not clear how often an SSC or peer review panel would be generating different fishing level recommendations. The purpose of a peer review process is to ensure the quality and credibility of scientific information, rather than providing a specific result, such as a fishing level recommendation.

To address the above issues, as reflected in section (b)(1)(ii) of the proposed NS2 guidelines, a peer review process per section 302(g)(1)(E) should be conducted early in the scientific evaluation process, in order to provide the SSC with a reasonable opportunity to review the peer review report and make recommendations to the Council. The proposed NS2 guidelines also state that the SSC may provide a recommendation to its Council that is inconsistent with the findings of a peer review, in whole or in part, but in such cases, the SSC should prepare a report outlining the areas of disagreement and the rationale and information supporting the SSC's determination. The proposed guidelines also state that the SSC should not repeat the peer review process by conducting a subsequent detailed technical review.

With regard to the SSC conducting a peer review of scientific information, the proposed action provides that the SSC's review should be complementary to, and not duplicative of, existing peer review processes established by the Secretary and each Council. Council and SSC members are encouraged to learn about the details in assessments and peer reviews by attending working group and peer review meetings that occur before any formal SSC evaluations of the scientific information are made.

With regard to SSC members, the proposed NS2 guidelines state that an SSC member may participate in the peer review of scientific information when beneficial due to the expertise and regional knowledge of the SSC member, as long as the SSC member meets the peer review quality standards as described in this proposed action. For an SSC member to participate in a peer review, the proposed action requires screening the SSC member as well as all other potential reviewers for conflicts of interest pursuant to NOAA's Policy on Conflicts of Interest for Peer Reviews Subject to OMB's Peer Review Bulletin. That policy limits review of one's own work. Furthermore, this proposed action provides that the review and evaluation of scientific information by the Councils' SSCs should be transparent, and include the recording of minority viewpoints.

Many ANPR comments focused on the evaluation and recommendations of the SSCs on the scientific information for catch-level specifications and pertinent measures of uncertainty; however, these issues were addressed in the recent revisions to the MSA National Standard 1 (NS1) guidelines (74 FR 3178, January 16, 2009).

D. SAFE Reports

The Secretary of Commerce (Secretary) has the responsibility for preparation and review of SAFE reports. The current NS2 guidelines state that the SAFE report is a document or set of documents that provides the Councils with a summary of scientific information, and contain specifications on the contents of SAFE reports. This proposed action would provide further clarification on the purpose and content of the SAFE report. Specifically, it provides guidance on the scientific

information that should be included in the SAFE to enable the SSC to fulfill its role in providing its Council with ongoing scientific advice for fishery management decisions.

ANPR comments suggested that a SAFE report should be a single report; however the proposed action maintains the existing NS2 guidelines language that describes the SAFE as a document or set of documents. This is necessary to provide the Secretary flexibility in the preparation of the SAFE report and accommodates differing regional practices with regard to the SAFE report. These proposed guidelines clarify that the SAFE report should include essential fish habitat (EFH) information, in accordance with the EFH provisions contained in § 600.815(a)(10), as a stand-alone chapter or clearly noted section.

The proposed NS2 guideline revisions contain provisions intended to facilitate the use of information in the SAFE reports and its availability to the Councils, NMFS, and public. For example, the proposed NS2 guideline revisions specify, as recommended by ANPR comments, that SAFE reports or similar documents must be made available by the Council or NMFS on a Web site accessible to the public, and that they include a summary of the information they contain and an index or table of contents of each component that comprises the SAFE report.

The proposed action would amend the existing NS2 guidelines by deleting the recommendation that the SAFE report contain information on safety for the fishery at issue. Safety of life at sea is now addressed in the National Standard 10 guidelines at § 600.355.

E. Fishery Management Plan (FMP) Development

This proposed action maintains the current NS2 guidelines language on FMP development, with only minor changes to the organization of the text.

III. References Cited

National Research Council of the National Academies (NRC). 2004. Improving the use of the ''best scientific information available'' standard in fisheries management. The National Academies Press, Washington, DC 105 pp.; *http://www.nap.edu/openbook.php.*

NOAA Office of the Chief Information Officer & High Performance Computing and Communications. 2006. National Oceanic and Atmospheric Administration Policy on Conflicts of Interest for Peer Review Subject to OMB Peer Review Bulletin. NOAA Memorandum, November 6, 2006; *http://www.cio.noaa.gov/Policy_Programs/NOAA_PRB_COI_Policy_110606.html.*

Office of Management and Budget (OMB). 2004. Final Information Quality Bulletin for Peer Review. Executive Office of the President, Office of Management and Budget, memorandum M–05–03; December 16, 2004.

Classification

The NMFS Assistant Administrator has determined that this proposed action is consistent with the provisions of the MSA and other applicable law, subject to further consideration after public comment.

This proposed action has been determined to be not significant for purposes of Executive Order 12866.

NMFS has prepared a regulatory impact review of this action, which is available at: *http://www.nmfs.noaa.gov/msa2007/otherprovisions.html.* This analysis describes the economic impact this proposed action, if adopted, would have on small entities of the United States. NMFS invites the public to comment on this proposal and the supporting analysis.

The Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration that these proposed revisions to the NS2 guidelines, if adopted, would not have any significant economic impact on a substantial number of small entities, as follows:

I certify that the attached proposed action issued under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) will not have any significant economic impacts on a substantial number of small entities, as defined under the Regulatory Flexibility Act. The proposed action would revise the National Standard 2 (NS2) guidelines at 50 CFR 600.315.

The proposed revisions to the NS2 guidelines provide guidance on: use of ''best scientific information available;'' standards for discretionary peer review processes established by the regional Fishery Management Councils (Councils), in conjunction with the Secretary of Commerce; the role of the Councils' Scientific and Statistical Committees (SSCs) in the review and evaluation of scientific information; and requirements for Stock Assessment and Fishery Evaluation (SAFE) reports. Pursuant to section 301(b) of the MSA, the NS guidelines do not have the force and effect of law. Councils and the Secretary of Commerce would use the NS2 guidelines when developing or amending Fishery Management Plans (FMPs) and regulations to implement FMPs and FMP amendments. NMFS believes that revisions to the NS2 guidelines will assist the Councils and the Secretary in addressing new MSA requirements intended to strengthen the role of science in fishery management actions.

When NMFS takes fishery management actions, such actions typically could have impacts on vessel owners and operators and dealers. In this case, the proposed action would provide procedural guidance to the Secretary and Council regarding the development of fishery conservation and management measures. Because the NS2 guidelines are general guidance and focus on scientific information and review processes, they would not have any economic impacts on vessel owners, operators, dealers, or any other entities. The NS2 guidelines leave considerable discretion to the Councils and the Secretary to consider alternative ways to accomplish fishery conservation and management goals consistent with the NS, other provisions of the Magnuson-Stevens Act, and other applicable law. As the Councils and/or the Secretary develop FMPs, FMP amendments, or other regulatory actions, the actions will be accompanied by environmental, economic, and social analyses prepared pursuant to the Regulatory Flexibility Act, National Environmental Policy Act, and other statutes. Therefore, an IRFA has not been prepared for this action.

These proposed revisions to the NS2 guidelines do not contain any new recordkeeping or reporting requirements subject to the Paperwork Reduction Act. When the Councils and the Secretary develop FMPs, FMP amendments, or other regulatory actions per the Magnuson-Stevens Act and NS2 guidelines, such actions may include new proposed collection-of-information requirements. In the event that new collection-of-information requirements are proposed, a specific analysis regarding the public's reporting burden would accompany such action. NMFS is not aware of any other relevant Federal rules that may duplicate, overlap or conflict with the proposed action.

List of Subjects in 50 CFR Part 600

Fisheries, Fishing, Recordkeeping and reporting requirements.

Dated: December 7, 2009.

Steve A. Murawski,

Director of Scientific Programs and Chief Science Advisor, National Marine Fisheries Service.

For the reasons stated in the preamble, 50 CFR part 600 is proposed to be amended as follows:

PART 600—MAGNUSON-STEVENS ACT PROVISIONS

1. The authority citation for part 600 continues to read as follows:

Authority: 16 U.S.C. 1801 *et seq.*

2. Section 600.315 is revised to read as follows:

§ 600.315 National Standard 2—Scientific Information.

(a) *Standard 2.* Conservation and management measures shall be based upon the best scientific information available.

(1) Fishery conservation and management require high quality and

timely biological, ecological, economic, and sociological scientific information to effectively conserve and manage living marine resources. Successful fishery management depends, in part, on the thorough analysis of this information, and the extent to which the information is applied for evaluating the impact that conservation and management measures will have on living marine resources, essential fish habitat (EFH), marine ecosystems, fisheries participants, fishing communities, and the nation.

(2) Scientific information that is used to inform decision making should include an evaluation of its uncertainty and identify gaps in the information. Management decisions should recognize the biological (*e.g.,* overfishing), ecological, sociological, and economic (*e.g.,* loss of fishery benefits) risks associated with the sources of uncertainty and gaps in the scientific information. Limitations in scientific information may not be used as a justification for delaying fishery management actions.

(3) Information from data-poor fisheries may require use of simpler assessment methods and greater use of proxies for quantities that can not be directly estimated, as compared to data-rich fisheries.

(4) Scientific information includes, but is not limited to, factual input, data, models, analyses, technical information, or scientific assessments. Scientific information can be conveyed through data compiled directly from surveys or sampling programs, or through models that are mathematical representations of reality constructed with primary data. The complexity of the model should not be the defining characteristic of its value; the data requirements and assumptions associated with a model should be commensurate with the resolution and accuracy of the available primary data.

(5) Science is a dynamic process, and new scientific findings constantly advance the state of knowledge. Best scientific information is, therefore, not static and entails developing and following a research plan with the following elements: Clear statement of objectives; conceptual model that provides the framework for interpreting results, making predictions, or testing hypotheses; study design with an explicit and standardized method of collecting data; documentation of methods, results, and conclusions; peer review, as appropriate; and communication of findings.

(6) Principles for evaluating best scientific information must be based on relevance, inclusiveness, objectivity, transparency and openness, timeliness, verification and validation, and peer review, as appropriate.

(i) *Relevance.* Scientific information should be pertinent to the current questions or issues under consideration and should be representative of the fishery being managed. In addition to the information collected directly about the fishery being managed, relevant information may be available about the same species in other areas, or about related species. For example, use of proxies may be necessary in data-poor situations. Analysis of related stocks or species is a powerful tool for inferring the likely traits of stocks for which stock-specific data are unavailable or are not sufficient to produce reliable estimates. Also, if management measures similar to those being considered have been introduced in other regions and resulted in particular behavioral responses from participants or business decisions from industry, such social and economic information may be relevant.

(ii) *Inclusiveness.* Three aspects of inclusiveness should be considered when developing and evaluating best scientific information:

(A) The relevant range of scientific disciplines should be consulted to encompass the scope of potential impacts of the management decision.

(B) Alternative points of view should be acknowledged and addressed openly when there is a diversity of scientific thought.

(C) Relevant local and traditional knowledge should be acknowledged (i.e., fishermen's empirical knowledge about the behavior and distribution of fish stocks). To the extent possible, an effort should be made to reconcile scientific information with local and traditional knowledge.

(iii) *Objectivity.* Scientific information should use standards for objectivity that prevent non-scientific considerations from impacting on its scientific integrity. The objectivity standards should ensure that information is accurate, reliable, and unbiased, and that information products are presented in an accurate, clear, complete, and balanced manner.

(iv) *Transparency and openness.*—(A) The Magnuson-Stevens Act provides broad public and stakeholder access to the fishery conservation and management process, including access to the scientific information upon which the process and management measures are based. Subject to the Magnuson-Stevens Act confidentiality requirements, the public should have access to each stage in the development of scientific information, from data collection, to analytical modeling, to decision making. Public comment should be solicited at appropriate times during the development of scientific information. Communication with the public should be structured to foster understanding of the scientific process.

(B) Scientific information products should describe data collection methods, report sources of uncertainty or statistical error, and acknowledge other data limitations. Such products should explain any decisions to exclude data from analysis. Scientific products should identify major assumptions and uncertainties of analytical models. Finally, such products should openly acknowledge gaps in scientific information.

(v) *Timeliness.*—(A) Sufficient time should be allotted to analyze recently acquired data to ensure its reliability and that it has been audited and subjected to appropriate review before it is used to inform management decisions. For those data that require being updated on a regular basis, the temporal gap between information collection and management implementation should be as short as possible, subject to regulatory constraints, and should be explicitly considered when developing conservation and management measures. In particular, late submission of scientific information to the Council process should be avoided if the information has circumvented the review process.

(B) Timeliness may also mean that in some cases, results of important studies or monitoring programs must be brought forward before a study is complete. Uncertainties and risks that arise from an incomplete study should be acknowledged, but interim results may be better than no results to help inform a management decision. Management decisions should not be delayed due to data limitations or the promise of future data collection or analysis.

(C) Historical information should be evaluated for its relevance, to inform the current situation. For example, species' life history characteristics may not change over time, and so remain relevant. Other time-series data (*e.g.,* abundance, catch statistics, market and trade trends) provide context for changes in fish populations, fishery participation, and effort, and therefore provide valuable information to inform current management decisions.

(vi) *Verification and validation.*—Methods used to produce scientific information should be verified and validated to the extent possible.

(A) *Verification* means that the data and procedures used to produce the

scientific information are documented in sufficient detail to allow reproduction of the analysis by others with an acceptable degree of precision. External reviewers of scientific information require this level of documentation to conduct a thorough review.

(B) *Validation* refers to the testing of analytical methods to ensure that they perform as intended. Validation should include whether the analytical method has been programmed correctly in the computer software, the precision of the estimates is adequate, model estimates are unbiased, and the estimates are robust to model assumptions. Models should be tested using simulated data from a population with known properties to evaluate how well the models estimate those characteristics. The concept of validation using simulation testing should be used, to the extent possible, to evaluate how well a management strategy meets management objectives.

(vii) *Peer review.* Peer review is a process used to ensure that the quality and credibility of scientific information and scientific methods meet the standards of the scientific and technical community. Peer review helps ensure objectivity, reliability, and integrity of scientific information. The peer review process is an organized method that uses peer scientists with appropriate and relevant expertise to evaluate scientific information.

(viii) To the extent practicable, substantial fishery management alternatives considered by a Council should be peer reviewed. Factors to consider when determining whether to conduct a peer review and if so, the appropriate level of review, include the novelty and complexity of the scientific information to be reviewed, the level of previous review and the importance of the information to be reviewed to the decision making process. If formal peer review is not practicable due to time or resource constraints, the development and analysis of scientific information used in or in support of fishery management actions should be as transparent as possible, in accordance with paragraph (a)(6)(iv) of this section.

(b) *Peer review process.* The Secretary and each Council may establish a peer review process for that Council for scientific information used to advise about the conservation and management of the fishery (Magnuson-Stevens Act section 302(g)(1)(E)). A peer review process is not a substitute for an SSC and should work in conjunction with the SSC (*see* § 600.310(b)(2)(v)(C)). This section provides guidance and standards that should be followed in order to establish a peer review process per section 302(g)(1)(E).

(1) The objective or scope of the peer review, the nature of the scientific information to be reviewed, and timing of the review should be considered when selecting the type of peer review to be used. The process established by the Secretary and Council for each Council should focus on providing review for information that has not yet undergone rigorous peer review, but that must be peer reviewed in order to provide reliable, high quality scientific advice for fishery conservation and management. Duplication of previously conducted peer review should be avoided.

(i) *Form of process.* The peer review process may include or consist of existing Council committees or panels if they meet the standards identified herein. The Secretary and Council have discretion to determine the appropriate peer review process for a specific information product. A peer review can take many forms, including individual letter or written reviews, and panel reviews.

(ii) *Timing.* The peer review should be conducted early in the process of producing scientific information or a work product, to the extent practicable. The timing will depend in part on the scope of the review. For instance, the peer review of a new or novel method or model should be conducted before there is an investment of time and resources in implementing the model and interpreting the results. The results of this type of peer review may contribute to improvements in the model or assessment.

(iii) *Scope of work.* The scope of work or charge (sometimes called the terms of reference) of any peer review should be determined in advance of the selection of reviewers. The scope of work contains the objective of the specific advice being sought. The scope of work should be carefully designed, with specific technical questions to guide the peer review process; it should ask peer reviewers to ensure that scientific uncertainties are clearly identified and characterized, it should allow peer reviewers the opportunity to offer a broad evaluation of the overall scientific or technical product under review, and it must not change during the course of the peer review. The scope of work may not request reviewers to provide advice on scientific policy (*e.g.,* amount of uncertainty that is acceptable or amount of precaution used in an analysis). Such policy considerations are in the purview of the Secretary and the Councils.

(2) *Peer reviewer selection.* The selection of participants in a peer review must be based on expertise, independence, and a balance of viewpoints, and be free of conflicts of interest.

(i) *Expertise and balance.* Peer reviewers must be selected based on scientific expertise and experience relevant to the disciplines of subject matter to be reviewed, including a balance in perspectives. The group of reviewers that constitute the peer review should have sufficiently broad and diverse expertise to represent the range of relevant scientific and technical perspectives to complete the objectives of the peer review.

(ii) *Conflict of interest.* Peer reviewers who are federal employees must comply with all applicable federal ethics requirements. Peer reviewers who are not federal employees must comply with the following provisions. Peer reviewers must not have any real or perceived conflicts of interest with the scientific information, subject matter, or work product under review, or any aspect of the statement of work for the peer review. For purposes of this section, a conflict of interest is any financial or other interest which conflicts with the service of the individual on a review panel because it:

(A) Could significantly impair the reviewer's objectivity; or

(B) Could create an unfair competitive advantage for a person or organization.

(C) Except for those situations in which a conflict of interest is unavoidable, and the conflict is promptly and publicly disclosed, no individual can be appointed to a review panel if that individual has a conflict of interest that is relevant to the functions to be performed. Conflicts of interest include, but are not limited to, the personal financial interests and investments, employer affiliations, and consulting arrangements, grants, or contracts of the individual and of others with whom the individual has substantial common financial interests, if these interests are relevant to the functions to be performed. Potential reviewers must be screened for conflicts of interest in accordance with the procedures set forth in the NOAA Policy on Conflicts of Interest for Peer Review subject to OMB's Peer Review Bulletin.

(iii) *Independence.* Peer reviewers must not have participated in the development of the work product or scientific information under review. For peer review of some work products or scientific information, a greater degree of independence may be necessary to assure credibility of the peer review process; reviewers should not be employed by the Council or entity that produced or utilizes the product for

management decisions. Peer review responsibilities should rotate across the available pool of qualified reviewers or among the members on a standing peer review panel, recognizing that, in some cases, repeated service by the same reviewer may be needed because of essential expertise.

(3) *Transparency.* A transparent process is one that allows the public full and open access to peer review panel meetings, background documents, and reports, subject to Magnuson-Stevens Act confidentiality requirements. The evaluation and review of scientific information by the Councils and their advisory panels must also be publicly transparent in accordance with the Councils' requirements for notifying the public of meetings. The date, time, location, and terms of reference (scope and objectives) of the peer review should be publicly announced 14 days before the review to allow public comments during meetings. Background documents should be available for public review in a timely manner prior to meetings. Peer review reports describing the scope and objectives of the review, findings in accordance with each objective, and conclusions should be publicly available. Names and organizational affiliations of reviewers also should be publicly available prior to review.

(4) *Publication of the peer review process.* The Secretary will announce the establishment of a peer review process under Magnuson-Stevens Act section 302(g)(1)(E) in the **Federal Register** along with a brief description of the process. In addition, detailed information on such processes will be made publicly available on the Council's Web site, and updated as necessary.

(c) *SSC scientific advice to the Council.* Each scientific and statistical committee shall provide its Council ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield, and achieving rebuilding targets, and reports on stock status and health, bycatch, habitat status, social and economic impacts of management measures, and sustainability of fishing practices (Magnuson-Stevens Act 302(g)(1)(B)).

(1) SSC scientific advice and recommendations to the Councils based on review and evaluation of scientific information must meet the guidelines of best scientific information available as described in paragraph (a) of this section. SSCs may conduct peer reviews, participate in peer reviews, or evaluate peer reviews to provide clear scientific advice to the Council. Such scientific advice should attempt to resolve conflicting scientific information, so that the Council will not be forced to engage in debate on technical merits. Debate and evaluation of scientific information should be part of the role of the SSC.

(2) SSC members may participate in a peer review when such participation is beneficial to the peer review due to the expertise and institutional memory of that SSC member, or beneficial to the Council's advisory body by allowing that SSC member to make a more informed evaluation of the scientific information. Participation of a SSC member in a peer review should not impair the ability of that SSC member to accomplish the advisory responsibilities to the Council.

(3) If an SSC as a body, or individual members of an SSC, conducts or participates in a peer review, those SSC members must meet the peer reviewer selection criteria as described in paragraph (b)(2) of this section. These guidelines require separate consideration from those of § 600.235, Financial Disclosure for Councils and Council committees. Additionally, when the SSC as a body is conducting a peer review, it should strive for consensus and meet the transparency guidelines for best scientific information available and peer reviews as described in paragraphs (a)(6)(iv) and (b)(3) of this section. If consensus cannot be reached, minority viewpoints should be recorded.

(4) The SSC's evaluation of a peer review conducted by a body other than the SSC should be linked to the extent and quality of peer review that has already taken place. For Councils with extensive and detailed peer review processes (e.g., a process established pursuant to Magnuson-Stevens Act section 302(g)(1)(E)), the evaluation by the SSC of the peer reviewed information should not repeat the previously conducted and detailed technical peer review. However, SSCs must maintain their role as advisors to the Council about scientific information that comes from an external peer review process. Therefore, the peer review of scientific information used to advise the Council, including a peer review process established by the Secretary and the Council under Magnuson-Stevens Act section 302(g)(1)(E), should be conducted early in the scientific evaluation process in order to provide the SSC with reasonable opportunity to review the peer review report and make recommendations to the Council as required under Magnuson-Stevens Act section 302(g)(1)(B).

(5) If the evaluation of scientific information by the SSC is inconsistent with the findings or conclusions of a peer review, in whole or in part, the SSC should prepare a report outlining the areas of disagreement, and the rationale and information used by the SSC for making its determination.

(6) Annual catch limits (ACLs) may not exceed the SSC's recommendations for fishing levels (Magnuson-Stevens Act section 302(h)(6)). The SSC recommendation that is most relevant to ACLs is acceptable biological catch (ABC), as both ACL and ABC are levels of annual catch (see § 600.310(b)(2)(v)(D)). Any peer review related to such recommendations should be conducted early in the process as described in paragraph (c)(4) of this section. The SSC should resolve differences between its recommendations and any relevant peer review recommendations per paragraph (c)(5) of this section.

(d) *SAFE Report.* The term SAFE (Stock Assessment and Fishery Evaluation) report, as used in this section, refers to a public document or a set of related public documents, that provides Councils with a summary of scientific information concerning the most recent biological condition of stocks, stock complexes, and marine ecosystems in the fishery management unit (FMU), essential fish habitat (EFH), and the social and economic condition of the recreational and commercial fishing interests, fishing communities, and the fish processing industries. It summarizes, on a periodic basis, the best scientific information available concerning the past, present, and possible future condition of the stocks, EFH, marine ecosystems, and fisheries being managed under Federal regulation.

(1) The Secretary has the responsibility to assure that SAFE reports are prepared and updated or supplemented as necessary whenever new information is available that requires a revision to the status determination criteria (SDC) or is likely to affect the overfishing level (OFL), optimum yield, or ABC values (§ 600.310(c)). The SAFE report and any comments or reports from the SSC must be available to the Council for making its management decisions for each FMP to ensure that the best scientific information available is being used. The Secretary or Councils may utilize any combination of personnel from Council, state, Federal, university, or other sources to acquire and analyze data and produce the SAFE report.

(2) The SAFE report provides information to the Councils and the

Secretary for determining annual catch limits (§ 600.310(f)(5)) for each stock in the fishery; documenting significant trends or changes in the resource, marine ecosystems, and fishery over time; implementing required EFH provisions (§ 600.815(a)(10)); and assessing the relative success of existing state and Federal fishery management programs. In addition, the SAFE report may be used to update or expand previous environmental and regulatory impact documents and ecosystem descriptions.

(3) Each SAFE report should contain the following:

(i) A description of the SDC (e.g., maximum fishing mortality rate threshold and minimum stock size threshold for each stock or stock complex in the fishery) (§ 600.310(e)(2)), along with information to determine:

(A) Whether overfishing is occurring with respect to any stock or stock complex, whether any stock or stock complex is overfished, whether the rate or level of fishing mortality applied to any stock or stock complex is approaching the maximum fishing mortality threshold, and whether the size of any stock or stock complex is approaching the minimum stock size threshold; and

(B) Any management measures necessary to rebuild an overfished stock or stock complex (if any) in the fishery to a level consistent with producing the MSY in that fishery.

(ii) Information on which to base catch specifications, including the most recent stock assessment documents and associated peer review reports, and recommendations and reports from the Council's SSC on OFL and ABC, preventing overfishing, and achieving rebuilding targets. Documentation of the data collection, estimation methods, and consideration of uncertainty in formulating catch specification recommendations should be included (see also § 600.310(f)(2)–(4)).

(iii) Information on sources of fishing mortality (both landed and discarded), including commercial and recreational catch and bycatch in other fisheries and description of data collection and estimation methods used to quantify total catch mortality, as required by National Standard 1 (§ 600.310(i)).

(iv) Information on bycatch of non-target species for each fishery.

(v) Review and evaluations of EFH information in accordance with the EFH provisions (§ 600.815(a)(10)), as a standalone chapter or in a clearly noted section.

(vi) Pertinent economic, social, community, and ecological information for assessing the success of management measures or the achievement of objectives of each FMP.

(4) To facilitate the use of the information in the SAFE report, and its availability to the Council, NMFS, and the public:

(i) The SAFE report should contain, or be supplemented by, a summary of the information and an index or table of contents to the components of the report.

(ii) The SAFE report or compilation of documents that comprise the SAFE report and index must be made available by the Council or NMFS on a readily accessible Web site.

(e) *FMP development.*—(1) FMPs must take into account the best scientific information available at the time of preparation. Between the initial drafting of an FMP and its submission for final review, new information often becomes available. This new information should be incorporated into the final FMP where practicable; but it is unnecessary to start the FMP process over again, unless the information indicates that drastic changes have occurred in the fishery that might require revision of the management objectives or measures.

(2) The fact that scientific information concerning a fishery is incomplete does not prevent the preparation and implementation of an FMP (*see* related §§ 600.320(d)(2) and 600.340(b)).

(3) An FMP must specify whatever information fishermen and processors will be required or requested to submit to the Secretary. Information about harvest within state waters, as well as in the EEZ, may be collected if it is needed for proper implementation of the FMP and cannot be obtained otherwise. The FMP should explain the practical utility of the information specified in monitoring the fishery, in facilitating inseason management decisions, and in judging the performance of the management regime; it should also consider the effort, cost, or social impact of obtaining it.

(4) An FMP should identify scientific information needed from other sources to improve understanding and management of the resource, marine ecosystem, the fishery, and fishing communities.

(5) The information submitted by various data suppliers should be comparable and compatible, to the maximum extent possible.

(6) FMPs should be amended on a timely basis, as new information indicates the necessity for change in objectives or management measures consistent with the conditions described in paragraph (d) of this section (SAFE reports). Paragraphs (e)(1) through (e)(5) of this section apply equally to FMPs and FMP amendments.

[FR Doc. E9–29589 Filed 12–10–09; 8:45 am]

BILLING CODE 3510–22–P

Notices

Federal Register
Vol. 74, No. 237
Friday, December 11, 2009

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

December 8, 2009.

The Department of Agriculture has submitted the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments regarding (a) Whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology should be addressed to: Desk Officer for Agriculture, Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), *OIRA_Submission@OMB.EOP.GOV* or fax (202) 395–5806 and to Departmental Clearance Office, USDA, OCIO, Mail Stop 7602, Washington, DC 20250–7602. Comments regarding these information collections are best assured of having their full effect if received within 30 days of this notification. Copies of the submission(s) may be obtained by calling (202) 720–8958.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Food and Nutrition Service

Title: Federal Collection Methods for Supplemental Nutrition Assistance Program Recipient Claims.

OMB Control Number: 0584–0446.

Summary of Collection: Section 13(b) of the Food and Nutrition Act of 2008 and Supplemental Nutrition Assistance Program (SNAP) regulations at 7 CFR 273.18 require State agencies to refer delinquent debtors for SNAP benefit over-issuance to the U.S. Department of Treasury for collection. The Debt Collection Improvement Act of 1995 requires these debts to be referred to Treasury for collection when they are 180 days or more delinquent. Through the Treasury Offset Program (TOP), 31 CFR Part 285, payments such as Federal income tax refunds, Federal salaries and other Federal payments payable to these delinquent debtors will be offset and the amount applied to the delinquent debt. TOP offers debtors an opportunity to repay the claim, and an opportunity to request a review of the validity of the collection action.

Need and Use of the Information: The information collected is used to operate Federal offset. State agencies collect this information to offset debts as a result of over-issuance of SNAP benefits that become delinquent claims. Without the information, compliance with the DCIA would not be possible and departmental participation in TOP would be jeopardized.

Description of Respondents: State, Local, or Tribal Government; Individual or households.

Number of Respondents: 253,724.

Frequency of Responses: Recordkeeping; Reporting: On occasion; Annually.

Total Burden Hours: 49,404.

Food and Nutrition Service

Title: Supplemental Form for Collecting Taxpayer Identifying Numbers.

OMB Control Number: 0584–0501.

Summary of Collection: Section 31001(y) of the Debt Collection Improvement Act of 1996 (Pub. L. 104–134) requires all Federal agencies to obtain taxpayer identifying number (TINs) from all individuals and entities they enter into a direct payment agreement with to furnish the TIN whenever a request for payment is submitted to Federal payment officials. A taxpayer identifying number can be either a Social Security Number or an Employer Identification Number.

Need and Use of the Information: The Food and Nutrition Service (FNS) will collect information using form FNS–711, ''Supplemental Form for Collecting Taxpayer Identifying Numbers'' from individuals and entities receiving payments directly from the agency under any of the various nutrition and nutrition education programs administered by the Agency. The information is collected at the time of program application, and is only collected once unless an entity renews its application or reapplies for program participation. If the information were not collected, FNS would be unable to include taxpayer identifying numbers with each certified request for payment.

Description of Respondents: Business or other for-profit; Individuals or households; Not-for-profit institutions.

Number of Respondents: 800.

Frequency of Responses: Report: On occasion; Other (at time of app.).

Total Burden Hours: 66.

Ruth Brown,

Departmental Information Collection Clearance Officer.

[FR Doc. E9–29551 Filed 12–10–09; 8:45 am]

BILLING CODE 3410–30–P

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

December 8, 2009.

The Department of Agriculture has submitted the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments regarding (a) Whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on those who are to respond, including

through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology should be addressed to: Desk Officer for Agriculture, Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), *OIRA_Submission@OMB.EOP.GOV* or fax (202) 395–5806 and to Departmental Clearance Office, USDA, OCIO, Mail Stop 7602, Washington, DC 20250–7602. Comments regarding these information collections are best assured of having their full effect if received within 30 days of this notification. Copies of the submission(s) may be obtained by calling (202) 720–8681.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Forest Service

Title: Forest Industries, Residential Fuel Wood, and Post Data Collection Systems

OMB Control Number: 0596–0010

Summary of Collection: The Forest and Range Renewable Resources Planning Act of 1974 (Pub. L. 93–278) and the Forest and Rangeland Renewable Resources Research Act of 1978 (Pub. L. 95–307) amended by the Energy Security Act of 1980 (42 U.S.C. 8701) require the Forest Service (FS) to evaluate trends in the use of logs and wood chips, to forecast anticipated levels of logs and wood chips, and to analyze changes in the harvest of the resources. Forest product and other wood-using industries are important to state, regional, and national economies. In most southern states, the value of rounded timber products is ranked either first or second in relation to other major agricultural crops. The importance and value of the timber products industry is significant in other regions of the United States as well. The FS will collect information using questionnaires.

Need and Use of the Information: To monitor the types, species, volumes, sources, and prices of the timber products harvested throughout the Nation, FS will collect information using the ''Pulpwood Received Questionnaire,'' ''Logs and Other Roundwood Received Questionnaire,'' and the ''Residential Fuel Wood and Post Questionnaire.'' The data will be used to develop specific economic development plans for a new forest-related industry in a State and to assist existing industries in identifying raw material problems and opportunities. If the information were not collected, data would not be available for sub-state, state, regional, and national policy makers and program developers to make decisions related to the forestland on a scientific basis.

Description of Respondents: Business or other for-profit; Not-for-profit institutions.

Number of Respondents: 4,011.

Frequency of Responses: Reporting: On occasion; Annually.

Total Burden Hours: 2,019.

Forest Service

Title: Objection to New Land Management Plans, Plan Amendments, and Plan Revisions

OMB Control Number: 0596–0158

Summary of Collection: The process for submitting objections to new land management plans, plan amendments, and plan revisions is set forth in Title 36 CFR 219.13. An objector must provide their name, mailing address, telephone number, and identify the specific proposed plan, amendment, or revision that is the subject of the objection. This is the minimum information needed for a citizen or organization to explain the nature of and rational for objections to new land management plans, plan amendments, and plan revisions.

This information must accompany a concise statement explaining how the environmental disclosure documents, if any, and proposed plan, amendment, or revision are inconsistent with law, regulation, Executive Order, or policy and any recommendations for change. The Reviewing Officer then reviews the objection(s) and relevant information and responds to the objector(s) in writing.

Need and Use of the Information: The information collected (objections to new land management plans, plan amendments, and plan revisions) is analyzed and responded to by a Forest Service official. At times, this information is used to modify land and resource management planning decisions. Forest supervisors and regional forests that make decisions on land and resource management planning also use the information. Without this information, the agency's decision-making will suffer from a reduction in public input and agency relationships with the public will deteriorate.

Description of Respondents: Individuals or households; Business or other for-profit; Not-for-profit institutions; State, Local or Tribal Government.

Number of Respondents: 1,210.

Frequency of Responses: Reporting: Other (once).

Total Burden Hours: 12,100.

Charlene Parker,

Departmental Information Collection Clearance Officer.

[FR Doc. E9–29552 Filed 12–10–09; 8:45 am]

BILLING CODE 3410–11–P

DEPARTMENT OF COMMERCE

Patent and Trademark Office

Admittance To Practice and Roster of Registered Patent Attorneys and Agents Admitted To Practice Before the United States Patent and Trademark Office (USPTO)

ACTION: Proposed collection; Comment Request.

SUMMARY: The United States Patent and Trademark Office (USPTO), as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on this continuing information collection, as required by the Paperwork Reduction Act of 1995.

DATES: Written comments must be submitted on or before February 9, 2010.

ADDRESSES: You may submit comments by any of the following methods:

- *E-mail: Susan.Fawcett@uspto.gov.* Include ''0651–0012 Admittance to Practice and Roster of Registered Patent Attorneys and Agents Admitted to Practice Before the USPTO comment'' in the subject line of the message.
- *Fax:* 571–273–0112, marked to the attention of Susan K. Fawcett.
- *Mail:* Susan K. Fawcett, Records Officer, Office of the Chief Information Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313–1450.
- *Federal e-Rulemaking Portal: http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Requests for additional information should be directed to the attention of Christine Nucker, Enrollment and Discipline Administrator, United States Patent and Trademark Office, Mail Stop OED, P.O. Box 1450, Alexandria, VA 22313–1450; by telephone at 571–272–6071; or by e-mail at *Christine.Nucker@uspto.gov.*

SUPPLEMENTARY INFORMATION:

I. Abstract

This collection of information is required by 35 U.S.C. 2(b)(2)(D), which permits the United States Patent and Trademark Office (USPTO) to establish regulations governing the recognition and conduct of agents, attorneys or other persons representing applicants or other parties before the USPTO. This statute also permits the USPTO to require information from applicants that shows that they are of good moral character and reputation and have the necessary qualifications to assist applicants with the patent process and to represent them before the USPTO.

The USPTO administers the statute through 37 CFR 1.21, 10.14 and 11.5 to 11.12. These rules address the requirements to apply for the examination for registration and to demonstrate eligibility to be a registered attorney or agent before the USPTO, including the fee requirements. The Office of Enrollment and Discipline (OED) collects information to determine the qualifications of individuals entitled to represent applicants before the USPTO in the preparation and prosecution of applications for a patent. The OED also collects information to administer and maintain the roster of attorneys and agents registered to practice before the USPTO. Information concerning registered attorneys and agents is published by the OED in a public roster that can be accessed through the USPTO Web site.

The information in this collection is used by the USPTO to review applications for the examination for registration and to determine whether an applicant may be added to, or an existing practitioner may remain on, the Register of Patent Attorneys and Agents.

There are eight forms associated with this information collection. Two new forms are being introduced into this collection: The Application for Reciprocal Recognition to Practice in Trademark Matters Before the United States Patent and Trademark Office Under 37 CFR 11.14(c) by a Foreign Attorney or Agent (PTO–158T) and the Application for Registration in the USPTO Law School Pilot Program to Practice Before the United States Patent and Trademark Office by a Foreign Attorney or Agent (PTO–158LS).

Three additional new items being introduced into the collection are: (1) Cover pages used for submitting correspondence to OED (for documents submitted with applications, requests for reconsideration, and petitions); (2) record keeping costs (a copy of every document submitted to OED in connection with an application for registration); and (3) electronic change of address submissions.

II. Method of Collection

By mail to the USPTO when the individual desires to participate in the information collection and electronically when the individual is submitting a change of address.

III. Data

OMB Number: 0651–0012.

Form Number(s): PTO–158, PTO–158A, PTO/275, PTO–107A, PTO–1209, PTO–2126, PTO–2149 and PTO–2150. Two new forms being introduced into the collection are PTO–158T and PTO–158LS.

Type of Review: Revision of a currently approved collection.

Affected Public: Businesses or other for-profits.

Estimated Number of Respondents: 93,340 responses per year.

Estimated Time per Response: The USPTO estimates that it will take the public approximately 1 minute (0.02 hours) to 40 hours, depending upon the complexity of the situation, to gather, prepare, and submit the various documents in this information collection.

Estimated Total Annual Respondent Burden Hours: 98,028 hours per year.

Estimated Total Annual Respondent Cost Burden: $23,010,260. The cost to respondents for taking the registration examination is estimated to be at the rate of $39 per hour, for a cost burden of $1,206,660. The USPTO estimates that the remaining items in this collection will be prepared by attorneys in private firms. Using the professional hourly rate of $325 for attorneys in private firms, the USPTO estimates $21,803,600 per year in respondent cost burden associated with the remaining items in this information collection.

Item	Estimated time for response	Estimated annual responses	Estimated annual burden hours
Application for Registration to Practice Before the United States Patent and Trademark Office (includes both the computerized exam and the USPTO-administered exam) FORM PTO–158.	30 minutes	4,420	2,210
Application for Registration to Practice Before the United States Patent and Trademark Office (former examiners; examination waived) FORM PTO–158.	30 minutes	100	50
Application for Registration to Practice Before the United States Patent and Trademark Office Under 37 CFR 11.6(c) by a Foreign Resident (examination waived) FORM PTO–158A.	30 minutes	100	50
Application for Reciprocal Recognition to Practice in Trademark Matters Before the United States Patent and Trademark Office Under 37 CFR 11.14(c) by a Foreign Attorney or Agent (examination waived) FORM PTO–158T.	30 minutes	25	13
Application for Registration in the USPTO Law School Pilot Program to Practice Before the United States Patent and Trademark Office Under 37 CFR 11.14(c) (examination waived) (Law School Students Only) FORM PTO–158LS.	30 minutes	60	30
Registration examination to become a registered practitioner	7 hours	4,420	30,940
Undertaking under 37 CFR 11.10(b) PTO/275	20 minutes	520	172
Data Sheet—Register of Patent Attorneys and Agents (individuals passing the registration exam) PTO–107A.	10 minutes	1,995	339
Data Sheet—Register of Patent Attorneys and Agents (Foreign applicants) PTO–107A	10 minutes	100	17
Data Sheet—Register of Patent Attorneys and Agents (former examiners seeking registration) PTO–107A.	10 minutes	100	17
Oath or Affirmation PTO–1209	5 minutes	2,195	176
Reinstatement to the Register PTO–107A	10 minutes	30	5
Written request for reconsideration and further review of disapproval notice of application	90 minutes	30	45
Petition to the Director of the Office of Enrollment and Discipline Under 37 CFR 11.12(c)	45 minutes	20	15
Petition for reinstatement after disciplinary removal under 37 CFR 11.7(h)	40 hours	4	160
Annual Practitioner Registration Fee FORM PTO–2126	10 minutes	32,500	5,525
Annual Fee, Limited Recognition FORM PTO–2126	10 minutes	200	34

Item	Estimated time for response	Estimated annual responses	Estimated annual burden hours
Voluntary Inactive Status FORM PTO–2126	10 minutes	2,000	340
Request for Restoration to Active Status from Voluntary Inactive Status FORM PTO–2126	10 minutes	700	119
Balance of Annual Fee Due on Restoration to Active Status from Voluntary Inactive Status FORM PTO–2126.	10 minutes	700	119
Delinquency Fee for Annual Fee FORM PTO–2126	10 minutes	2,100	357
Reinstatement Fee (fee required to be paid after the due date of the required annual fee) FORM PTO–2126.	10 minutes	420	71
Sponsor Application for USPTO Continuing Legal Education (CLE) FORM PTO–2149	1 hour	350	350
Certification of Attendance at USPTO-approved CLE Training FORM PTO–2150	1 hour	350	350
Practitioner request for paper version of CLE	5 minutes	100	8
On-line version of the seminar CLE	2 hours	28,000	56,000
Paper version of the CLE	2 hours	100	200
Practitioner's supporting documentation for a motion to hold in abeyance a disciplinary proceeding because of a current disability or addiction.	40 hours	1	40
Cover pages used for submitting correspondence to OED (for documents submitted with applications, Requests for Reconsideration, and petitions).	1 minute	7,500	150
Change of address—electronic submission	2 minutes	4,200	126
Total		93,340	98,028

Estimated Total Annual (non-hour) Respondent Cost Burden: $5,710,143. There are no capital start-up or maintenance costs associated with this information collection. There are, however, non-hour costs due to record keeping requirements, filing fees, and postage costs.

There are record keeping costs as a result of the Oath which includes a notary public requirement. The average fee for having a document notarized is $2. The USPTO estimates that it will receive 2,195 responses to this information collection per year as a result of this notary requirement, for a total cost of $4,390 per year. Also, there is another record keeping cost being added into the collection. The General Requirements Bulletin recommends that ''applicants should make and keep a copy of every document submitted to the office in connection with an application for registration.'' The USPTO estimates that it will take an applicant approximately 5 minutes (0.08 hours) to print and retain a copy of the submissions and that approximately 4,700 responses will be made per year, for a total of 376 hours. Using the professional rate of $325 per hour for attorneys in private firms, the USPTO estimates that the record keeping cost associated with this copy requirement will be $122,200 per year, for a total record keeping cost of $126,590.

There are also filing fees associated with this collection. The application fees for registration to practice before the USPTO vary depending on whether the applicant is a current applicant, a former examiner, or a foreign resident. The fee for administration of the computerized examination to become a registered patent practitioner also varies depending on how the examination is administered. The total annual non-hour cost burden associated with filing fees is $5,561,840.

Item	Responses (a)	Filing fee ($) (b)	Total non-hour cost burden (a) × (b) (c)
Non-Refundable Application Fee for Registration to Practice Before the United States Patent and Trademark Office (includes both the computerized exam and the USPTO-administered exam)	4,420	$40.00	$176,800.00
Non-Refundable Application Fee for Enrollment and/or Reinstatement to Practice Before the United States Patent and Trademark Office Under 37 CFR 1.21(a)(10) (those who must prove fitness to practice)	35	1,600.00	56,000.00
Application fee for Registration to Practice Before the United States Patent and Trademark Office, as applicable when used for registration fees only (former examiners; examination waived)	100	40.00	4,000.00
Application for Registration to Practice Before the United States Patent and Trademark Office Under 37 CFR 11.6(c) by a Foreign Resident (examination waived)	100	40.00	4,000.00
Application fee for Reciprocal Recognition to Practice in Trademark Matters Before the United States Patent and Trademark Office Under 37 CFR 11.14(c) by a Foreign Attorney/Agent (examination waived)	25	40.00	1,000.00
Application Fee for Registration in the USPTO Law School Pilot Program to Practice Before the United States Patent and Trademark Office Under 37 CFR 11.14(c) (examination waived) (Law School students only)	60	0.00	0.00
Registration examination fee for administration of computerized examination to become a registered patent practitioner administered by the USPTO (USPTO-administered exam)	20	450.00	9,000.00
Registration examination fee for administration of computerized examination to become a registered patent practitioner administered by a commercial entity (Computer exam)	4,400	200.00	880,000.00
Undertaking under 37 CFR 11.10(b)	520	0.00	0.00
Data Sheet—Register of Patent Attorneys and Agents (includes applicants that passed the examination, former examiners, and foreign applicants)	2,195	100.00	219,500.00
Oath or Affirmation	2,195	0.00	0.00
Reinstatement to the Register	30	100.00	3,000.00

Item	Responses (a)	Filing fee ($) (b)	Total non-hour cost burden (a) × (b) (c)
Written request for reconsideration and further review of disapproval notice of application	30	130.00	3,900.00
Petition to the Director of the Office of Enrollment and Discipline under 11.12(c)	20	130.00	2,600.00
Petition for reinstatement after disciplinary removal under 11.7(h)	4	1,600.00	6,400.00
Annual Practitioner Registration Fee	32,500	118.00	3,835,000.00
Annual Fee, Limited Recognition	200	118.00	23,600.00
Voluntary Inactive Status	2,000	25.00	50,000.00
Request for Restoration to Active from Voluntary Inactive Status	700	50.00	35,000.00
Balance of annual fee due on restoration to active from voluntary inactive status	700	93.00	65,100.00
Delinquency fee for annual fee (fee paid after the due date and for CLE)	2,100	50.00	105,000.00
Reinstatement Fee (required to be paid after the due date of the required annual fee or CLE)	420	100.00	42,000.00
Sponsor Application for USPTO CLE	350	60.00	21,000.00
Certification of Attendance at USPTO-approved CLE Training	350	0.00	0.00
Practitioner request for paper version of CLE program and furnished narrative	100	75.00	7,500.00
On-line version of the Seminar CLE	28,000	0.00	0.00
Paper version of the CLE	100	0.00	0.00
Practitioner's supporting documentation for a motion to hold in abeyance a disciplinary proceeding because of a current disability or addiction	1	11,440.00	11,440.00
Cover pages used for submitting correspondence to OED (includes "Request for Reconsideration" cover page)	7,500	0.00	0.00
Change of address—electronic submission	4,200	0.00	0.00
Total	93,375	.....	5,561,840.00

The General Requirements Bulletin for Admission to the Examination for Registration to Practice in Patent Cases before the USPTO states that all business with the USPTO should be transacted in writing. The actions of the OED will be based exclusively on the written record in the USPTO (37 CFR 1.2). Personal attendance is unnecessary. All documents may be submitted to the USPTO by first-class mail through the United States Postal Service. Mailed submissions should include a certificate of mailing for each piece of correspondence enclosed, stating the date of deposit or transmission to the USPTO. The USPTO estimates that the average first-class postage cost for responses to this collection will vary from 44 cents for one ounce to $4.80 for one pound, depending on the individual submission. The total annual non-hour cost burden associated with postage costs is $21,713.

Item	Responses (a)	Postage cost ($) (b)	Total non-hour cost burden (a) × (b) (c)
Application for Registration to Practice Before the United States Patent and Trademark Office (includes both the computerized exam and the USPTO-administered exam)	4,420	$0.61	$2,696.00
Application for Registration to Practice Before the United States Patent and Trademark Office (former examiners; examination waived)	100	0.61	61.00
Application for Registration to Practice Before the United States Patent and Trademark Office Under 37 CFR 11.6(c) by a Foreign Resident (examination waived)	100	0.44	44.00
Application for Reciprocal Recognition to Practice in Trademark Matters Before the United States Patent and Trademark Office Under 37 CFR 11.14(c) by a Foreign Attorney or Agent (examination waived)	25	0.61	15.00
Application for Registration in the USPTO Law School Pilot Program to Practice Before the United States Patent and Trademark Office Under 37 CFR 11.14(c) (examination waived) (Law School Students only)	60	0.00	0.00
Registration examination to become a registered practitioner	4,420	0.00	0.00
Undertaking under 37 CFR 11.10(b)	520	0.00	0.00
Data Sheet—Register of Patent Attorneys and Agents (includes applicants that passed the examination, former examiners, and foreign applicants)	2,195	0.44	966.00
Oath or Affirmation	2,195	0.00	0.00
Reinstatement to the Register	30	0.44	13.00
Written request for reconsideration and further review of disapproval notice of application	30	0.61	18.00
Petition to the Director of the Office of Enrollment and Discipline under 37 CFR 11.12(c)	20	1.73	35.00
Petition for reinstatement after disciplinary removal under 37 CFR 11.7(h)	4	0.78	3.00
Annual Practitioner Registration Fee	32,500	0.44	14,300.00
Annual Fee, Limited Recognition	200	0.44	88.00
Voluntary Inactive Status	2,000	0.44	880.00
Request for Restoration to Active from Voluntary Inactive Status	700	0.44	308.00
Balance of annual fee due on restoration to active from voluntary inactive status	700	0.44	308.00
Delinquency Fee for annual fee (fee paid after the due date and for CLE)	2,100	0.44	924.00
Reinstatement fee (required to be paid after the due date of the required annual fee or CLE)	420	0.44	185.00
Sponsor application for USPTO CLE	350	1.73	606.00
Certification of Attendance at USPTO-approved CLE Training	350	0.61	214.00
Practitioner request for paper version of CLE program and furnished narrative	100	0.44	44.00

Item	Responses (a)	Postage cost ($) (b)	Total non-hour cost burden (a) × (b) (c)
On-line version of the Seminar CLE	28,000	0.00	0.00
Paper version of the CLE	100	0.00	0.00
Practitioner's supporting documentation for a motion to hold in abeyance a disciplinary proceeding because of a current disability or addiction	1	4.80	5.00
Cover pages used for submitting correspondence to OED (includes ''Request for Reconsideration'' cover page)	7,500	0.00	0.00
Change of Address—electronic submission	4,200	0.00	0.00
Total	93,340	.....	21,713.00

The USPTO estimates that the total (non-hour) respondent cost burden for this collection in the form of recordkeeping costs, filing fees, and postage costs is $5,710,143.

IV. Request for Comments

Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden (including hours and cost) of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Comments submitted in response to this notice will be summarized or included in the request for OMB approval of this information collection; they will also become a matter of public record.

Dated: December 7, 2009.

Susan K. Fawcett,

Records Officer, USPTO, Office of the Chief Information Officer.

[FR Doc. E9–29528 Filed 12–10–09; 8:45 am]

BILLING CODE 3510–16–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–533–848]

Commodity Matchbooks from India: Antidumping Duty Order

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

SUMMARY: Based on affirmative final determinations by the Department of Commerce (the Department) and the International Trade Commission (the ITC), the Department is issuing an antidumping duty order on commodity matchbooks from India. On December 4, 2009, the ITC notified the Department of its affirmative determination of material injury to a U.S. industry.

EFFECTIVE DATE: December 11, 2009.

FOR FURTHER INFORMATION CONTACT: Holly Phelps or Elizabeth Eastwood, AD/CVD Operations, Office 2, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW, Washington, DC 20230; telephone: (202) 482–0656 and (202) 482–3874, respectively.

SUPPLEMENTARY INFORMATION:

Background

On October 22, 2009, the Department published its affirmative final determination of sales at less-than-fair-value in the antidumping duty investigation of commodity matchbooks from India. *See Notice of Final Determination of Sales at Less Than Fair Value: Commodity Matchbooks from India*, 74 FR 54536 (Oct. 22, 2009).

On December 4, 2009, the ITC notified the Department of its final determination pursuant to section 735(d) of the Tariff Act of 1930, as amended (the Act), that an industry in the United States is materially injured by reason of less-than-fair-value imports of commodity matchbooks from India. *See* section 735(b)(1)(A)(i) of the Act.

Scope of the Order

The scope of this order includes commodity matchbooks, also known as commodity book matches, paper matches or booklet matches.[1] Commodity matchbooks typically, but do not necessarily, consist of twenty match stems which are usually made from paperboard or similar material tipped with a match head composed of any chemical formula. The match stems may be stitched, stapled, or otherwise fastened into a matchbook cover of any material, on which a striking strip composed of any chemical formula has been applied to assist in the ignition process.

Commodity matchbooks included in the scope of this order may or may not contain printing. For example, they may have no printing other than the identification of the manufacturer or importer. Commodity matchbooks may also be printed with a generic message such as ''*Thank You*'' or a generic image such as the American Flag, with store brands (*e.g.*, *Kroger*, *7-Eleven*, *Shurfine* or *Giant*); product brands for national or regional advertisers such as cigarettes or alcoholic beverages; or with corporate brands for national or regional distributors (*e.g.*, *Penley Corp.* or *Diamond Brands*). They all enter retail distribution channels. Regardless of the materials used for the stems of the matches and regardless of the way the match stems are fastened to the matchbook cover, all commodity matchbooks are included in the scope of this order.

All matchbooks, including commodity matchbooks, typically comply with the United States Consumer Product Safety Commission (CPSC) Safety Standard for Matchbooks, codified at 16 CFR 1202.1 *et seq.*

The scope of this order excludes promotional matchbooks, often referred to as ''not for resale,'' or ''specialty advertising'' matchbooks, as they do not enter into retail channels and are sold to businesses that provide hospitality, dining, drinking or entertainment services to their customers, and are given away by these businesses as promotional items. Such promotional matchbooks are distinguished by the physical characteristic of having the name and/or logo of a bar, restaurant, resort, hotel, club, café/coffee shop, grill, pub, eatery, lounge, casino, barbecue or individual establishment printed prominently on the matchbook cover. Promotional matchbook cover printing also typically includes the

[1] Such commodity matchbooks are also referred to as ''for resale'' because they always enter into retail channels, meaning businesses that sell a general variety of tangible merchandise, *e.g.*, convenience stores, supermarkets, dollar stores, drug stores and mass merchandisers.

address and the phone number of the business or establishment being promoted.[2] Also excluded are all other matches that are not fastened into a matchbook cover such as wooden matches, stick matches, box matches, kitchen matches, pocket matches, penny matches, household matches, strike-anywhere matches (aka ''SAW'' matches), strike-on-box matches (aka ''SOB'' matches), fireplace matches, barbeque/grill matches, fire starters, and wax matches.

The merchandise subject to this order is properly classified under subheading 3605.00.0060 of the Harmonized Tariff Schedule of the United States (HTSUS). Subject merchandise may also enter under subheading 3605.00.0030 of the HTSUS. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the merchandise covered by the order is dispositive.

Provisional Measures

Section 733(d) of the Act states that suspension of liquidation instructions issued pursuant to an affirmative preliminary determination may not remain in effect for more than four months except where exporters representing a significant proportion of exports of the subject merchandise request the Department to extend that four-month period to no more than six months. At the request of the exporters that accounted for a significant proportion of exports of the subject merchandise in the investigations of commodity matchbooks from India, we extended the four-month period to no more than six months. *See Commodity Matchbooks from India: Notice of Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination*, 74 FR 26366 (June 2, 2009) (*Preliminary Determination*).

In this investigation, the six-month period beginning on the date of the publication of the preliminary determination (*i.e.*, June 2, 2009) ended on November 29, 2009. Furthermore, section 737 of the Act states that definitive duties are to begin on the date of publication of the ITC's final injury determination. Therefore, in accordance with section 733(d) of the Act, we will instruct U.S. Customs and Border Protection (CBP) to terminate the suspension of liquidation and to liquidate, without regard to antidumping duties, unliquidated entries of commodity matchbooks from India entered, or withdrawn from warehouse, for consumption on or after November 29, 2009, and before the date of publication of the ITC's final injury determination in the **Federal Register**. Suspension of liquidation will resume on or after the date of publication of the ITC's final injury determination in the **Federal Register**.

Antidumping Duty Order

On December 4, 2009, in accordance with section 735(d) of the Act, the ITC notified the Department of its final determination that an industry in the United States is materially injured within the meaning of section 735(b)(1)(A)(i) of the Act by reason of less-than-fair-value imports of commodity matchbooks from India. Therefore, in accordance with section 736(a)(1) of the Act, the Department will direct CBP to assess, upon further instruction by the Department, antidumping duties equal to the amount by which the normal value of the merchandise exceeds the U.S. price of the merchandise for all relevant entries of commodity matchbooks from India. These antidumping duties will be assessed on all unliquidated entries of commodity matchbooks from India entered, or withdrawn from warehouse, for consumption on or after June 2, 2009, the date on which the Department published its notice of preliminary determination in the **Federal Register**, but prior to November 29, 2009. *See Preliminary Determination*, 74 FR at 26366.

On or after the date of publication of the ITC's notice of final determination in the **Federal Register**, CBP will require, pursuant to section 736(a)(3) of the Act, at the same time as importers would normally deposit estimated duties on this merchandise, a cash deposit for the subject merchandise equal to the estimated weighted-average antidumping margins listed below, adjusted for export subsidies found in the final determination of the companion countervailing duty investigation of this merchandise. Specifically, for cash deposit purposes, we are subtracting from the applicable cash deposit rate that portion of the rate attributable to the export subsidies found in the affirmative countervailing duty determination for each respondent (*i.e.*, 9.88 percent for Triveni, and 9.88 percent for ''All Others'').

The weighted-average margins and cash deposit rates are as follows:

Producer or exporter	Weighted-average margin (percent)	Cash deposit rate (percent)
Triveni Safety Matches Pvt. Ltd.	66.07	56.19
All Others	66.07	56.19

[2] The gross distinctions between commodity matchbooks and promotional matchbooks may be summarized as follows: (1) if it has no printing, or is printed with a generic message such as ''Thank You'' or a generic image such as the American Flag, or printed with national or regional store brands or corporate brands, it is commodity; (2) if it has printing, and the printing includes the name of a bar, restaurant, resort, hotel, club, café/coffee shop, grill, pub, eatery, lounge, casino, barbecue, or individual establishment prominently displayed on the matchbook cover, it is promotional.

The ''All Others'' rate applies to all entries of the subject merchandise except for entries from the company identified individually above.

This notice constitutes the antidumping duty orders with respect to commodity matchbooks from India, pursuant to section 736(a) of the Act. Interested parties may contact the Department's Central Records Unit, Room 1117 of the Main Commerce Building, for copies of an updated list of antidumping duty orders currently in effect.

This order is issued and published in accordance with section 736(a) of the Act and 19 CFR 351.211(b).

Dated: December 7, 2009.

Carole A. Showers,

Acting Deputy Assistant Secretary for Policy and Negotiations.

[FR Doc. E9–29572 Filed 12–10–09; 8:45 am]

BILLING CODE 3510–DS–S

DEPARTMENT OF COMMERCE

International Trade Administration

[A–351–837, A–533–828, C–533–829, A–588–068, A–580–852, A–201–831, A–549–820]

Continuation of Antidumping and Countervailing Duty Finding and Orders: Prestressed Concrete Steel Wire Strand from Brazil, India, Japan, the Republic of Korea, Mexico, and Thailand

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

SUMMARY: As a result of the determinations by the Department of Commerce (the ''Department'') and the International Trade Commission (the ''ITC'') that revocation of the antidumping duty (''AD'') finding/orders on prestressed concrete steel wire strand (''PC strand'') from Brazil, India, Japan, the Republic of Korea (''Korea''), Mexico, and Thailand would likely lead to continuation or recurrence of dumping, that revocation of the countervailing duty (''CVD'') order on PC strand from India would likely lead to continuation or recurrence of a countervailable subsidy, and that revocation of these AD and CVD finding/orders would likely lead to a continuation or recurrence of material injury to an industry in the United States, the Department is publishing this notice of the continuation of these AD finding/orders and CVD order.

EFFECTIVE DATE: December 11, 2009.

FOR FURTHER INFORMATION CONTACT: Minoo Hatten (AD finding/orders) or Eric Greynolds (CVD order), AD/CVD Operations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street & Constitution Avenue NW, Washington, DC 20230; telephone: (202) 482–1690 and (202) 482–6071, respectively.

SUPPLEMENTARY INFORMATION:

Background

On December 1, 2008, the Department initiated and the ITC instituted sunset reviews of the AD and CVD finding/orders on PC strand from Brazil, India, Japan, Korea, Mexico, and Thailand, pursuant to sections 751(c) and 752 of the Tariff Act of 1930, as amended (the ''Act''), respectively. *See Initiation of Five-Year (''Sunset'') Reviews*, 73 FR 72770 (December 1, 2008). As a result of its reviews, the Department found that revocation of the AD finding/orders would likely lead to continuation or recurrence of dumping and that revocation of the CVD order would likely lead to continuation or recurrence of subsidization, and notified the ITC of the margins of dumping and the subsidy rates likely to prevail were the finding/orders revoked. *See Prestressed Concrete Steel Wire Strand from Brazil, India, Japan, the Republic of Korea, Mexico, and Thailand: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Finding/Orders*, 74 FR 13179 (March 26, 2009), and *Final Results of Expedited Sunset Review of Countervailing Duty Order: Prestressed Concrete Steel Wire Strand from India*, 74 FR 15938 (April 8, 2009) (collectively, ''*Final Results*'').

On December 1, 2009, the ITC determined that revocation of the AD and CVD finding/orders on PC strand from Brazil, India, Japan, Korea, Mexico, and Thailand would likely lead to continuation or recurrence of material injury within a reasonably foreseeable time. *See Prestressed Concrete Steel Wire Strand from Brazil, India, Japan, Korea, Mexico, and Thailand*, 74 FR 62820 (December 1, 2009) (''*ITC Determination*'') and USITC Publication 4114 (November 2009), entitled *Prestressed Concrete Steel Wire Strand from Brazil, India, Japan, Korea, Mexico, and Thailand* (Inv. Nos. 701–TA–432 and 731–TA–1024–1028 (Review) and AA1921–188 (Third Review)).

Scope of the Finding/Orders

The merchandise subject to the AD and CVD orders on PC strand from Brazil, India, Korea, Mexico, and Thailand is steel strand produced from wire of non-stainless, non-galvanized steel, which is suitable for use in prestressed concrete (both pre-tensioned and post-tensioned) applications. The product definition encompasses covered and uncovered strand and all types, grades, and diameters of PC strand.

The merchandise subject to the AD finding on PC strand from Japan is steel wire strand, other than alloy steel, not galvanized, which is stress-relieved and suitable for use in prestressed concrete.

The merchandise subject to the finding/orders is currently classifiable under subheadings 7312.10.3010 and 7312.10.3012 of the Harmonized Tariff Schedule of the United States (HTSUS). Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the merchandise under the finding/orders is dispositive.

Determination

As a result of the determinations by the Department and the ITC that revocation of these AD and CVD finding/orders would likely lead to continuation or recurrence of dumping or a countervailable subsidy, and of material injury to an industry in the United States, pursuant to section 751(d)(2) of the Act, the Department hereby orders the continuation of the AD and CVD finding/orders on PC strand from Brazil, India, Japan, Korea, Mexico, and Thailand. U.S. Customs and Border Protection will continue to collect cash deposits at the rates in effect at the time of entry for all imports of subject merchandise. The effective date of the continuation of these finding/orders is the date of publication in the **Federal Register** of this Notice of Continuation.

Pursuant to sections 751(c)(2) and 751(c)(6) of the Act, the Department intends to initiate the next five-year review of these finding/orders not later than November 2014.

These five-year (sunset) reviews and notice are in accordance with section 751(c) of the Act and published pursuant to section 777(i)(1) of the Act.

Dated: December 7, 2009.

Carole A. Showers,

Acting Deputy Assistant Secretary for Policy and Negotiations.

[FR Doc. E9–29587 Filed 12–10–09; 8:45 am]

BILLING CODE 3510–DS–S

DEPARTMENT OF COMMERCE

International Trade Administration

[C–533–849]

Commodity Matchbooks from India: Countervailing Duty Order

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

SUMMARY: Based on affirmative final determinations by the Department of Commerce (the Department) and the U.S. International Trade Commission (ITC), the Department is issuing a countervailing duty order on commodity matchbooks from India.

EFFECTIVE DATE: December 11, 2009.

FOR FURTHER INFORMATION CONTACT: Andrew Huston or Dana Mermelstein, AD/CVD Operations, Office 6, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW, Washington, DC 20230; telephone: (202) 482–4261 and (202) 482–1391, respectively.

SUPPLEMENTARY INFORMATION:

Background

In accordance with section 705(d) of the Tariff Act of 1930, as amended (the Act), on October 22, 2009, the Department published its final determination in the countervailing duty investigation of commodity matchbooks from India. *See Commodity Matchbooks From India: Final Affirmative Countervailing Duty Determination*, 74 FR 54547 (October 22, 2009). On December 4, 2009, the ITC notified the Department of its final determination, pursuant to section 705(b)(1)(A)(i) of the Act, that an industry in the United States is materially injured by reason of subsidized imports of subject merchandise from India. *See Commodity Matchbooks from India*, USITC Pub. 4090, Investigation Nos. 701–TA–459 and 731–TA–1155 (Final) (November 2009).

Scope of the Order

The scope of this order covers commodity matchbooks, also known as commodity book matches, paper matches or booklet matches.[1]Commodity matchbooks typically, but do not necessarily, consist of twenty match stems which are usually made from paperboard or similar material tipped with a match head composed of any chemical formula. The match stems may be stitched, stapled or otherwise fastened into a matchbook cover of any material, on which a striking strip composed of any chemical formula has been applied to assist in the ignition process.

Commodity matchbooks included in the scope of this order may or may not contain printing. For example, they may have no printing other than the identification of the manufacturer or importer. Commodity matchbooks may also be printed with a generic message such as ''Thank You'' or a generic image such as the American Flag, with store brands (e.g., Kroger, 7-Eleven, Shurfine or Giant); product brands for national or regional advertisers such as cigarettes or alcoholic beverages; or with corporate brands for national or regional distributors (e.g., Penley Corp. or Diamond Brands). They all enter retail distribution channels. Regardless of the materials used for the stems of the matches and regardless of the way the match stems are fastened to the matchbook cover, all commodity matchbooks are included in the scope of this investigation. All matchbooks, including commodity matchbooks, typically comply with the United States Consumer Product Safety Commission (CPSC) Safety Standard for Matchbooks, codified at 16 CFR § 1202.1 *et seq.*

The scope of this order excludes promotional matchbooks, often referred to as ''not for resale,'' or ''specialty advertising'' matchbooks, as they do not enter into retail channels and are sold to businesses that provide hospitality, dining, drinking or entertainment services to their customers, and are given away by these businesses as promotional items. Such promotional matchbooks are distinguished by the physical characteristic of having the name and/or logo of a bar, restaurant, resort, hotel, club, café/coffee shop, grill, pub, eatery, lounge, casino, barbecue or individual establishment printed prominently on the matchbook cover. Promotional matchbook cover printing also typically includes the address and the phone number of the business or establishment being promoted.[2] Also excluded are all other matches that are not fastened into a matchbook cover such as wooden matches, stick matches, box matches, kitchen matches, pocket matches, penny matches, household matches, strike-anywhere matches (aka ''SAW'' matches), strike-on-box matches (aka ''SOB'' matches), fireplace matches, barbeque/grill matches, fire starters, and wax matches.

The merchandise subject to this order is properly classified under subheading 3605.00.0060 of the Harmonized Tariff Schedule of the United States (HTSUS). Subject merchandise may also enter under subheading 3605.00.0030 of the HTSUS. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the merchandise subject to this order is dispositive.

Countervailing Duty Order

On December 4, 2009, the ITC notified the Department of its final determination, made pursuant to section 705(b)(1)(A)(i) of the Act, that an industry in the United States is materially injured as a result of subsidized imports of commodity matchbooks from India. As a result of the ITC's final determination, in accordance with section 706(a) of the Act, the Department will direct U.S. Customs and Border Protection (CBP) to assess, upon further instruction by the Department, countervailing duties on all unliquidated entries of commodity matchbooks from India entered, or withdrawn from warehouse, for consumption on or after April 6, 2009, the date on which the Department published its preliminary affirmative countervailing duty determination in the **Federal Register**[3], and before August 4, 2009, the date on which the Department instructed CBP to discontinue the suspension of liquidation in accordance with section 703(d) of the Act. Section 703(d) of the Act states that the suspension of liquidation pursuant to a preliminary countervailing duty determination may not remain in effect for more than four months. Entries of commodity matchbooks made on or after August 4, 2009, and prior to the date of publication of the ITC's final determination in the **Federal Register**, are not liable for the assessment of countervailing duties, due to the

[1] Such commodity matchbooks are also referred to as ''for resale'' because they always enter into retail channels, meaning businesses that sell a general variety of tangible merchandise, *e.g.*, convenience stores, supermarkets, dollar stores, drug stores and mass merchandisers.

[2] The gross distinctions between commodity matchbooks and promotional matchbooks may be summarized as follows: (1) if it has no printing, or is printed with a generic message such as ''Thank You'' or a generic image such as the American Flag, or printed with national or regional store brands or corporate brands, it is commodity; (2) if it has printing, and the printing includes the name of a bar, restaurant, resort, hotel, club, café/coffee shop, grill, pub, eatery, lounge, casino, barbecue, or individual establishment prominently displayed on the matchbook cover, it is promotional.

[3] *See Commodity Matchbooks from India: Preliminary Affirmative Countervailing Duty Determination and Alignment of Final Countervailing Duty Determination with Final Antidumping Duty Determination*, 74 FR 15444 (April 6, 2009).

Department's discontinuation, effective August 4, 2009, of the suspension of liquidation.

In accordance with section 706 of the Act, the Department will direct CBP to reinstitute the suspension of liquidation for commodity matchbooks from India, effective the date of publication of the ITC's notice of final determination in the **Federal Register**, and to assess, upon further advice by the Department, pursuant to section 706(a)(1) of the Act, countervailing duties for each entry of the subject merchandise in the amount of the net countervailable subsidy rates for the subject merchandise. On or after the date of publication of the ITC's final injury determination in the **Federal Register**, CBP must require, at the same time as importers would normally deposit estimated duties on this merchandise, a cash deposit equal to the rates noted below:

Exporter/Manufacturer	Net Subsidy Rate
Triveni Safety Matches Pvt. Limited	9.88%
All Others	9.88%

This notice constitutes the countervailing duty order with respect to commodity matchbooks from India pursuant to section 706(a) of the Act. Interested parties may contact the Department's Central Records Unit, Room 1117 of the main Commerce building, for copies of an updated list of countervailing duty orders currently in effect.

This countervailing duty order is issued and published in accordance with sections 705(c)(2), 706(a) and 777(i)(1) of the Act, and 19 CFR 351.211.

Dated: December 7, 2009.

Carole A. Showers,

Acting Deputy Assistant Secretary for Import Administration.

[FR Doc. E9–29571 Filed 12–10–09; 8:45 am]

BILLING CODE 3510–DS–S

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XS16

Fisheries of the Exclusive Economic Zone Off Alaska; North Pacific Halibut and Sablefish Individual Fishing Quota Cost Recovery Programs

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notification of standard prices and fee percentage.

SUMMARY: NMFS publishes individual fishing quota (IFQ) standard prices for the IFQ cost recovery program in the halibut and sablefish fisheries of the North Pacific. This action is intended to provide holders of halibut and sablefish IFQ permits with the 2009 standard prices and fee percentage to calculate the required payment for IFQ cost recovery fees due by January 31, 2010.

DATES: Effective December 11, 2009.

FOR FURTHER INFORMATION CONTACT: Troie Zuniga, Fee Coordinator, 907–586–7231.

SUPPLEMENTARY INFORMATION:

Background

NMFS Alaska Region administers the halibut and sablefish individual fishing quota (IFQ) programs in the North Pacific. The IFQ programs are limited access systems authorized by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and the Northern Pacific Halibut Act of 1982. Fishing under the IFQ programs began in March 1995. Regulations implementing the IFQ program are set forth at 50 CFR part 679.

In 1996, the Magnuson-Stevens Act was amended to, among other things, require the Secretary of Commerce to ''collect a fee to recover the actual costs directly related to the management and enforcement of any individual quota program.'' This requirement was further amended in 2006 to include collection of the actual costs of data collection, and to replace the reference to ''individual quota program'' with a more general reference to ''limited access privilege program'' at section 304(d)(2)(A). This section of the Magnuson-Stevens Act also specifies an upper limit on these fees, when the fees must be collected, and where the fees must be deposited.

On March 20, 2000, NMFS published regulations implementing the IFQ cost recovery program (65 FR 14919), which are set forth at § 679.45. Under the regulations, an IFQ permit holder incurs a cost recovery fee liability for every pound of IFQ halibut and IFQ sablefish that is landed on his or her IFQ permit(s). The IFQ permit holder is responsible for self-collecting the fee liability for all IFQ halibut and IFQ sablefish landings on his or her permit(s). The IFQ permit holder is also responsible for submitting a fee liability payment to NMFS on or before the due date of January 31 of the year following the year in which the IFQ landings were made. The dollar amount of the fee due is determined by multiplying the annual IFQ fee percentage (3 percent or less) by the ex-vessel value of all IFQ landings made on a permit and summing the totals of each permit (if more than one).

Standard Prices

The fee liability is based on the sum of all payments made to fishermen for the sale of the fish during the year. This includes any retro-payments (e.g., bonuses, delayed partial payments, post-season payments) made to the IFQ permit holder for previously landed IFQ halibut or sablefish.

For purposes of calculating IFQ cost recovery fees, NMFS distinguishes between two types of ex-vessel value: actual and standard. Actual ex-vessel value is the amount of all compensation, monetary or non-monetary, that an IFQ permit holder received as payment for his or her IFQ fish sold. Standard ex-vessel value is the default value on which to base fee liability calculations. IFQ permit holders have the option of using actual ex-vessel value if they can satisfactorily document it; otherwise the standard ex-vessel value is used.

Regulations at § 679.45(c)(2)(i) require the Regional Administrator to publish IFQ standard prices during the last quarter of each calendar year. These standard prices are used, along with estimates of IFQ halibut and IFQ sablefish landings, to calculate standard values. The standard prices are described in U.S. dollars per IFQ equivalent pound for IFQ halibut and IFQ sablefish landings made during the year. IFQ equivalent pound(s) is the weight (in pounds) for an IFQ landing, calculated as the round weight for sablefish and headed and gutted net weight for halibut. NMFS calculates the standard prices to closely reflect the variations in the actual ex-vessel values of IFQ halibut and IFQ sablefish landings by month and port or port-group. The standard prices for IFQ halibut and IFQ sablefish are listed in the tables that follow the next section. Data from ports are combined as necessary to protect confidentiality.

Fee Percentage

Section 304(d)(2)(B) of the Magnuson-Stevens Act specifies a maximum fee of 3 percent of the ex-vessel value of fish harvested under an IFQ Program. NMFS annually sets a fee percentage for sablefish and halibut IFQ holders that is based on the actual annual costs associated with certain management and enforcement functions, as well as the standard ex-vessel value of the catch subject to the IFQ fee for the current year. The method used by NMFS to

calculate the IFQ fee percentage is described at § 679.45(d)(2)(ii).

Regulations at § 679.45(d)(3)(i) require NMFS to publish the IFQ fee percentage for the halibut and sablefish IFQ fisheries in the **Federal Register** during or before the last quarter of each year. For the 2009 sablefish and halibut IFQ fishing season, an IFQ permit holder is to use a fee liability percentage of 1.6 to calculate his or her fee for landed IFQ in pounds. The IFQ permit holder is responsible for submitting the fee liability payment to NMFS on or before January 31, 2010.

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REGISTERED BUYER STANDARD EX-VESSEL PRICES BY LANDING LOCATION FOR 2009 IFQ SEASON

LANDING LOCATION	PERIOD ENDING	*HALIBUT* STANDARD EX-VESSEL PRICE	*SABLEFISH* STANDARD EX-VESSEL PRICE
CORDOVA	February 28	-	-
	March 31	-	-
	April 30	-	-
	May 31	-	-
	June 30	-	-
	July 31	-	-
	August 31	$3.67	-
	September 30	$3.33	-
	October 31	$3.33	-
	November 30	$3.33	-
DUTCH HARBOR	February 28	-	-
	March 31	-	-
	April 30	-	-
	May 31	-	-
	June 30	-	-
	July 31	-	-
	August 31	-	-
	September 30	-	-
	October 31	-	-
	November 30	-	-
HOMER	February 28	-	-
	March 31	-	-
	April 30	-	-
	May 31	$2.86	-
	June 30	$3.26	-
	July 31	$3.52	-
	August 31	$3.53	-
	September 30	$3.71	-
	October 31	$3.71	-
	November 30	$3.71	-

LANDING LOCATION	PERIOD ENDING	***HALIBUT*** STANDARD EX-VESSEL PRICE	***SABLEFISH*** STANDARD EX-VESSEL PRICE
KETCHIKAN	February 28	-	-
	March 31	-	-
	April 30	-	-
	May 31	-	-
	June 30	-	-
	July 31	$3.14	-
	August 31	$3.42	-
	September 30	$3.37	-
	October 31	$3.37	-
	November 30	$3.37	-
KODIAK	February 28	-	-
	March 31	$3.13	-
	April 30	$2.87	$3.49
	May 31	$2.72	$3.09
	June 30	$2.89	$3.26
	July 31	$3.05	$2.98
	August 31	$3.23	$2.86
	September 30	$3.09	$2.65
	October 31	$3.09	$2.65
	November 30	$3.09	$2.65
PETERSBURG	February 28	-	-
	March 31	$3.42	-
	April 30	$3.22	-
	May 31	$2.91	-
	June 30	$3.10	-
	July 31	$3.38	-
	August 31	$3.57	-
	September 30	-	-
	October 31	-	-
	November 30	-	-

LANDING LOCATION	PERIOD ENDING	*HALIBUT* STANDARD EX-VESSEL PRICE	*SABLEFISH* STANDARD EX-VESSEL PRICE
SEWARD	February 28	-	-
	March 31	-	-
	April 30	-	-
	May 31	-	-
	June 30	-	-
	July 31	-	-
	August 31	-	-
	September 30	-	-
	October 31	-	-
	November 30	-	-
SITKA	February 28	-	-
	March 31	-	-
	April 30	-	-
	May 31	-	-
	June 30	-	-
	July 31	-	-
	August 31	-	-
	September 30	-	-
	October 31	-	-
	November 30	-	-
YAKUTAT	February 28	-	-
	March 31	-	-
	April 30	-	-
	May 31	-	-
	June 30	-	-
	July 31	-	-
	August 31	-	-
	September 30	-	-
	October 31	-	-
	November 30	-	-

PORT GROUP	PERIOD ENDING	***HALIBUT*** STANDARD EX-VESSEL PRICE	***SABLEFISH*** STANDARD EX-VESSEL PRICE
BERING SEA[1]	February 28	-	-
	March 31	-	-
	April 30	-	-
	May 31	$2.32	$3.14
	June 30	$2.53	$3.33
	July 31	$2.54	$3.17
	August 31	$2.63	$3.34
	September 30	$2.64	$3.13
	October 31	$2.64	$3.13
	November 30	$2.64	$3.13
CENTRAL GULF[2]	February 28	-	-
	March 31	$3.71	$3.20
	April 30	$3.25	$3.41
	May 31	$2.75	$3.12
	June 30	$3.04	$3.16
	July 31	$3.32	$3.32
	August 31	$3.41	$3.13
	September 30	$3.12	$2.88
	October 31	$3.12	$2.88
	November 30	$3.12	$2.88
SOUTHEAST[3]	February 28	-	-
	March 31	$3.49	$3.24
	April 30	$3.23	$3.24
	May 31	$2.94	$3.30
	June 30	$3.12	$3.31
	July 31	$3.34	$3.28
	August 31	$3.50	$3.44
	September 30	$3.44	$3.15
	October 31	$3.44	$3.15
	November 30	$3.44	$3.15

PORT GROUP	PERIOD ENDING	*HALIBUT* STANDARD EX-VESSEL PRICE	*SABLEFISH* STANDARD EX-VESSEL PRICE
ALL[4]	February 28	-	-
	March 31	$3.57	$3.22
	April 30	$3.22	$3.31
	May 31	$2.79	$3.18
	June 30	$2.97	$3.22
	July 31	$3.07	$3.26
	August 31	$3.18	$3.29
	September 30	$3.06	$3.08
	October 31	$3.06	$3.08
	November 30	$3.06	$3.08

1 Landing locations Within Port Group - Bering Sea: Adak, Akutan, Akutan Bay, Atka, Bristol Bay, Chefornak, Dillingham, Captains Bay, Dutch Harbor, Egegik, Ikatan Bay, Hooper Bay, King Cove, King Salmon, Kipnuk, Mekoryuk, Naknek, Nome, Quinhagak, Savoonga, St. George, St. Lawrence, St. Paul, Togiak, Toksook Bay, Tununak, Beaver Inlet, Ugadaga Bay, Unalaska.

2 Landing Locations Within Port Group - Central Gulf of Alaska: Anchor Point, Anchorage, Alitak, Chignik, Cordova, Eagle River, False Pass, West Anchor Cove, Girdwood, Chinitna Bay, Halibut Cove, Homer, Kasilof, Kenai, Kenai River, Alitak, Kodiak, Port Bailey, Nikiski, Ninilchik, Old Harbor, Palmer, Sand Point, Seldovia, Resurrection Bay, Seward, Valdez, Whittier.

3 Landing Locations Within Port Group - Southeast Alaska: Angoon, Baranof Warm Springs, Craig, Edna Bay, Elfin Cove, Excursion Inlet, Gustavus, Haines, Hollis, Hoonah, Hyder, Auke Bay, Douglas, Tee Harbor, Juneau, Kake, Ketchikan, Klawock, Metlakatla, Pelican, Petersburg, Portage Bay, Port Alexander, Port Graham, Port Protection, Point Baker, Sitka, Skagway, Tenakee Springs, Thorne Bay, Wrangell, Yakutat.

4 Landing Locations Within Port Group - All: **For Alaska:** All landing locations included in 1, 2, and 3. **For California:** Eureka, Fort Bragg, Other California. **For Oregon:** Astoria, Aurora, Lincoln City, Newport, Warrenton, Other Oregon. **For Washington:** Anacortes, Bellevue, Bellingham, Nagai Island, Edmonds, Everett, Granite Falls, Ilwaco, La Conner, Port Angeles, Port Orchard, Port Townsend, Ranier, Fox Island, Mercer Island, Seattle, Standwood, Other Washington. **For Canada:** Port Hardy, Port Edward, Prince Rupert, Vancouver, Haines Junction, Other Canada.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: December 4, 2009.

Emily H. Menashes,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. E9–29463 Filed 12–10–09; 8:45 am]

BILLING CODE 3510–22–S

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XR61

Marine Mammals; File No. 14535

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; issuance of permit.

SUMMARY: Notice is hereby given that Colleen Reichmuth, Ph.D., University of California at Santa Cruz, Long Marine Laboratory, 100 Shaffer Road, Santa Cruz, CA has been issued a permit to conduct research on captive pinnipeds for scientific research.

ADDRESSES: The permit and related documents are available for review upon written request or by appointment in the following office(s):

Permits, Conservation and Education Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Room 13705, Silver Spring, MD 20910; phone (301) 713–2289; fax (301) 713–0376; and Southwest Region, NMFS, 501 West Ocean Blvd., Suite 4200, Long Beach, CA 90802–4213; phone (562) 980–4001; fax (562) 980–4018.

FOR FURTHER INFORMATION CONTACT: Amy Sloan or Kate Swails, (301) 713–2289.

SUPPLEMENTARY INFORMATION: On September 15, 2009, notice was published in the **Federal Register** (74 FR 47207) that a request for a permit to conduct research on captive pinnipeds for scientific research had been submitted by the above-named applicant. The requested permit has been issued under the authority of the Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 *et seq.*), and the regulations governing the taking and importing of marine mammals (50 CFR part 216).

Permit No. 14535 authorizes psychological and physiological research annually on up to 2 captive harbor seals (*Phoca vitulina*), 2 California sea lions (*Zalophus californianus*), and 2 northern elephant seals (*Mirounga angustirostris*) at Long Marine Laboratory, which are trained to voluntarily participate in studies designed to evaluate their perceptual and cognitive capabilities. The permit expires on December 31, 2014.

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), a final determination has been made that the activity proposed is categorically excluded from the requirement to prepare an environmental assessment or environmental impact statement.

Dated: December 7, 2009.

P. Michael Payne,

Chief, Permits, Conservation and Education Division, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. E9–29585 Filed 12–10–09; 8:45 am]

BILLING CODE 3510–22–S

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XR34

Marine Mammals; File No. 14301

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; receipt of application.

SUMMARY: Notice is hereby given that the University of Alaska Museum of the North, 907 Yukon Drive, Fairbanks, AK 99775–6960 (Dr. Link E. Olson, Responsible Party), has applied in due form for a permit to collect, acquire, import and export various marine mammal and endangered species specimens, including partial and whole carcasses from species of marine mammals under the jurisdiction of NMFS for the purpose of curating samples for future scientific research.

DATES: Written, telefaxed, or e-mail comments must be received on or before January 11, 2010.

ADDRESSES: The application and related documents are available upon written request or by appointment in the following office(s):

Permits, Conservation and Education Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Room 13705, Silver Spring, MD 20910; phone (301) 713–2289; fax (301) 713–0376; and

Alaska Region, NMFS, P.O. Box 21668, Juneau, AK 99802–1668; phone (907) 586–7221; fax (907) 586–7249.

Written comments on this application should be submitted to the Chief, Permits, Conservation and Education Division, at the address listed above. Comments may also be submitted by facsimile to (301) 713–0376, or by email to *NMFS.Pr1Comments@noaa.gov.* Please include the File No. in the subject line of the email comment.

Those individuals requesting a public hearing should submit a written request to the Chief, Permits, Conservation and Education Division at the address listed above. The request should set forth the specific reasons why a hearing on this application would be appropriate.

FOR FURTHER INFORMATION CONTACT: Amy Sloan or Kate Swails, (301) 713–2289.

SUPPLEMENTARY INFORMATION: The subject permit is requested under the authority of the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 *et seq.*), the regulations governing the taking and importing of marine mammals (50 CFR part 216), the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq.*), the regulations governing the taking, importing, and exporting of endangered and threatened species (50 CFR 222–226), and the Fur Seal Act of 1966, as amended (16 U.S.C. 1151 *et seq.*).

The University of Alaska Museum of the North functions as an archive for scientific specimens of marine mammals under the jurisdiction of the National Marine Fisheries and is a major repository of marine mammal material from the Arctic and North Pacific oceans. Under the proposed permit, the applicant would (1) import/export marine mammal parts (bones and organ tissue samples) from dead beach-cast carcasses, (2) receive/archive and export samples of marine mammals taken by Alaskan Native subsistence hunters, and (3) receive, import/export specimens from scientists in academic, federal, and state institutions involved in marine mammal research under their own permits. Unlimited samples from up to 1240 pinnipeds (35 species; excluding walrus) and 1700 cetaceans (81 species) would be collected, received, imported, or exported annually. Import/export activities would occur world-wide. No live animals would be harassed or taken, lethally or otherwise, under the requested permit. The permit is requested for a five-year period.

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), an initial determination has been made that the activity proposed is categorically excluded from the requirement to prepare an environmental assessment or environmental impact statement.

Concurrent with the publication of this notice in the **Federal Register**, NMFS is forwarding copies of the application to the Marine Mammal Commission and its Committee of Scientific Advisors.

Dated: August 27, 2009.

P. Michael Payne,

Chief, Permits, Conservation and Education Division, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. E9–29600 Filed 12–10–09; 8:45 am]

BILLING CODE 3510–22–S

DEPARTMENT OF COMMERCE

International Trade Administration

The Manufacturing Council: Meeting of the Manufacturing Council

AGENCY: International Trade Administration, U.S. Department of Commerce.

ACTION: Notice of a meeting via teleconference.

SUMMARY: The Manufacturing Council will hold a meeting via teleconference to deliberate a draft letter of recommendation to the Secretary of Commerce.

DATES: December 15, 2009.

Time: 1 p.m. (ET).

For the Conference Call-In Number and Further Information, Please Contact: The Manufacturing Council Executive Secretariat, Room 4043, Washington, DC, 20230 (Phone: 202–482–4501), or e-mail the Executive Secretary at *Marc.Chittum@trade.gov*.

Dated: December 7, 2009.

J. Marc Chittum,

Executive Secretary, The Manufacturing Council.

[FR Doc. E9–29599 Filed 12–8–09; 4:15 pm]

BILLING CODE 3510–DR–P

DEPARTMENT OF COMMERCE

International Trade Administration

Mission Statement

AGENCY: Department of Commerce.

ACTION: Notice.

RepCAN 2010—U.S. Matchmaker and Exhibition, Vancouver, Toronto & Montreal, Canada, June 9–10, June 14–15, June 16–17, 2010.

Mission Description

The United States Department of Commerce's International Trade Administration, U.S. and Foreign Commercial Service, is organizing RepCAN 2010 a combined trade mission and exhibition, to be held in Vancouver, British Columbia on June 9–10; Toronto, Ontario on June 14–15; and Montreal, Quebec on June 16–17, under the U.S. and Foreign Commercial Service's Canada First Building Bridges to Prosperity Initiative. RepCAN 2010 is a horizontal event open to all industry sectors. It is designed to provide export-ready, small to medium-sized U.S. companies (SMEs) with a highly efficient and cost-effective opportunity to establish profitable commercial relations with prospective agents, distributors and end-users in any one, two, or all three, of Canada's primary regional markets. RepCAN 2010 also offers U.S. new-to-export firms an ideal opportunity to gain valuable international business experience in a low-risk market with strong potential for high returns.

RepCAN 2010 participants will benefit from a full range of business facilitation and trade promotion services provided by the U.S. Commercial Service in Canada, including:

✓ Current market sector information
✓ Professional Commercial Service business counseling
✓ Pre-event marketing support and promotional consideration
✓ Pre-event market briefings by industry experts
✓ Individual business meetings with potential Canadian partners
✓ Exhibit space for table-top displays and promotional materials
✓ Networking events to include business, industry and government contacts
✓ Full logistical support, including hotel bookings at preferred rates
✓ On-site assistance and support
✓ National market exposure
✓ Listings on CS Canada's website and in a special RepCAN brochure
✓ Follow-up assistance

Commercial Setting

The United States and Canada share the largest and most dynamic commercial relationship in the world. In 2008, two-way merchandise trade crossing our common border with Canada stood at US$596.9 billion, or more than US$1.6 billion per day as U.S. exports to Canada grew by 5.0%. Today, U.S. trade with Canada, just one country, is about the same as total U.S. trade with all 27 countries of the European Union combined. Canada also represents the number one export market for 36 of our 50 states and is among the top five export markets for another ten states.

Canada's geographic proximity, open market economy, stable business climate and receptivity to U.S. goods and services make it the number one gateway to the international marketplace for thousands of U.S. export-ready SMEs. The North American Free Trade Agreement (NAFTA), which provides many U.S. origin goods with duty-free entry into Canada, also contributes to the relatively low-cost, low-risk, access that U.S. SMEs can gain to prosper and grow in the global marketplace.

Leading Sectors in Canada for U.S. Export and Investment:

- Medical Devices
- Safety and Security Equipment
- Agricultural Machinery and Equipment
- Aerospace and Defense
- Consumer Electronics
- Travel and Tourism
- Automotive Aftermarket Parts & Accessories/Service Equipment
- Computer Hardware
- Telecommunications Equipment
- Computer Software
- Oil and Gas Field Machinery
- Electrical Power Systems

Mission Goals

To provide U.S. export-ready, small-to-medium-sized firms with cost-effective, low opportunities to identify, establish and develop valuable long-term business relations in Canada, our number one export market.

To provide state, regional and local governments in the United States with a ready-made vehicle that can be employed to help their rural and minority-owned SMEs cross the threshold into the international market.

To provide our individual participants with export successes and our multipliers with a positive export-development experience.

Mission Scenario

In each city, participants will be invited to attend an informal ice-breaker reception, where they will meet CS staff and receive their updated participant's information package, as well as briefings on the following day's program. Participants will be allowed to set-up their table-top displays and pop-up exhibits that evening. Participants will also be provided with a six-foot draped table for their table-top displays and four chairs for use during the event.

The day of the event will begin with a briefing on ''Doing Business in Canada'' focusing on the respective regional market and featuring CS Canada business service providers and others speaking on the commercial climate, local business practices, shipping to Canada, and other aspects of doing business in Canada.

Individual one-on-one business meetings with pre-screened prospective Canadian business partners will commence immediately following the briefing in the exhibit hall/meeting room and will continue throughout the day. In addition to one-on-one meetings

on site, conference calls and off-site meetings will be conducted with prospective partners, as appropriate.

A networking reception for participants, prospective partners and other members of the local business community will be held at the end of the day.

Proposed Mission Timetable

The proposed schedule allows for about a day and a half in each city.

Wednesday, June 9–10, 2010	RepCan 2010 begins in Vancouver, British Columbia Welcome briefing. Business matchmaking: 1 full day of appointments. Networking reception. Participants will depart June 11.
Monday, June 14–15, 2010	RepCan 2010's second stop: Toronto, Ontario. Welcome briefing. Business matchmaking: 1 full day of appointments. Networking reception. Participants will depart Toronto, Ontario on the morning of June 16 for Montreal, Quebec.
Wednesday, June 16–17, 2010	Mission's third and last stop: Montreal, Quebec. Welcome briefing. Business matchmaking: 1 full day of appointments. Networking reception. Participants will depart June 18.

Participation Requirements

All parties interested in participating in RepCAN must complete and submit an application for consideration by the U.S. Commercial Service. All applicants will be evaluated on their ability to meet certain conditions and best satisfy the selection criteria as outlined below. The mission is open on a first come first served basis. A minimum of 10 and a maximum of 25 companies per stop will be selected to participate from the applicant pool.

Fees and Expenses

After a company has been selected to participate in the RepCAN 2010 event, a payment to the Department of Commerce in the form of a participation fee is required. The participation fee is $1,250 per company for small-and-medium enterprises (SME [*]) and $1,750 per company for large firms, per stop with up to two company representatives. Expenses for lodging, transportation, most meals, and incidentals will be the responsibility of each mission participant.

Conditions for Participation

• An applicant must submit a completed and signed event application and supplemental application materials, including adequate information on the company's products and/or services, primary market objectives, and goals for participation. If the Department of Commerce receives an incomplete application, the Department may reject the application, request additional information, or take the lack of information into account when evaluating the applications.

• Each applicant must also certify that the products and services it seeks to export through the mission are either produced in the United States, or, if not, marketed under the name of a U.S. firm and have at least 51 percent U.S. content of the value of the finished product or service.

Selection Criteria

• Suitability of the company's products or services to the target market(s);

• Applicant's potential for business in the target market(s), including likelihood of exports resulting from the event; and

• Relevance of the company's business line to the mission's goals.

Referrals from political organizations and any documents containing references to partisan political activities (including political contributions) will be removed from an applicant's submission and not considered during the selection process.

Timeframe for Recruitment and Applications

Recruitment for RepCAN 2010 will begin with the release of this mission statement and publication of this announcement in the **Federal Register.**

RepCAN 2010 recruitment will be conducted in an open and public manner. Outreach will include posting on the Commerce Department trade mission calendar and other Internet Web sites, two webinar presentations (one to multiplier groups, *i.e.* USEACs, State Offices/Economic Development and one to U.S. companies) press releases to general and trade media, direct mail, broadcast fax, notices by industry trade associations and other multiplier groups, and publicity at industry meetings, symposia, conferences, and trade shows.

RepCAN 2010 will also be promoted through the CS Canada's quarterly newsletter and on CS Canada's homepage—*http://www.buyusa.gov.*

Recruitment Start: Immediately.

Registration Ends: March 31, 2010.

Participants Arrive: Vancouver, June 9, 2010. Montreal, June 14, 2010. Toronto, June 16, 2010.

Formal Program: Vancouver, June 10, 2010. Montreal, June 15, 2010. Toronto, June 17, 2010.

The U.S. Commercial Service in Canada and its offices in Toronto, Montreal and Vancouver will lead recruitment activities. Applications received after March 31, 2010 will be considered only if space and scheduling constraints permit.

Contacts: RepCAN 2010: Vancouver—Lead, Judy Simonite, Commercial Specialist, U.S. Consulate General—Vancouver, 1095 W. Pender St., #1950, Vancouver, BC V6E 2M6, tel: 604–685–3385, e-mail: *Judy.Simonite@mail.doc.gov.*

RepCAN 2010: Toronto—Lead, Stefan Popescu, Commercial Specialist, U.S. Consulate General—Toronto, 480 University Ave., #620, Toronto, ON M5G 1V2, tel: 416–595–5412 ext. 223, e-mail: *Stefan.Popescu*@mail.doc.gov.

RepCAN 2010: Montreal—Lead, Connie Irrera, Commercial Specialist, U.S. Consulate General—Montreal, P.O. Box 65 Stn Desjardins, Montreal, QC

[*] An SME is defined as a firm with 500 or fewer employees or that otherwise qualifies as a small business under SBA regulations (*see http://www.sba.gov/services/contractingopportunities/sizestandardstopics/index.html*). Parent companies, affiliates, and subsidiaries will be considered when determining business size. The dual pricing reflects the Commercial Service's user fee schedule that became effective May 1, 2008 (*see http://www.export.gov/newsletter/march2008/initiatives.html* for additional information).

H5B 1G1, tel: 514–908–3662, e-mail: *Connie.Irrera@mail.doc.gov.*

Sean Timmins,

Global Trade Programs, Commercial Service Trade Missions Program.

[FR Doc. E9–29559 Filed 12–10–09; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–549–821]

Polyethylene Retail Carrier Bags From Thailand: Final Results of Antidumping Duty Administrative Review

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

SUMMARY: On August 10, 2009, the Department of Commerce published the preliminary results of the 2007/2008 administrative review of the antidumping duty order on polyethylene retail carrier bags from Thailand. We gave interested parties an opportunity to comment on the preliminary results. Based on our analysis of the comments received and an examination of our calculations, we have made certain changes for the final results. The final weighted-average dumping margins for the respondents are listed below in the ''Final Results of the Review'' section of this notice.

DATES: *Effective Date:* December 11, 2009.

FOR FURTHER INFORMATION CONTACT: Kristin Case or Richard Rimlinger, AD/CVD Operations, Office 5, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephone (202) 482–3174 or (202) 482–4477, respectively.

SUPPLEMENTARY INFORMATION:

Background

On August 10, 2009, the Department of Commerce (the Department) published *Polyethylene Retail Carrier Bags from Thailand: Preliminary Results of Antidumping Duty Administrative Review,* 74 FR 39928 (August 9, 2009) (*Preliminary Results*), in the **Federal Register.** The administrative review covers Thai Plastic Bags Industries Co., Ltd., and Master Packaging Co., Ltd. (Master Packaging). The Department has determined previously that Thai Plastic Bags Industries Co., Ltd., Apec Film Ltd., and Winner's Pack Co., Ltd., comprise the Thai Plastic Bags Group (TPBG). *See Notice of Final Determination of Sales at Less Than Fair Value: Polyethylene Retail Carrier Bags From Thailand,* 69 FR 34122, 34123 (June 18, 2004). The period of review is August 1, 2007, through July 31, 2008.

We invited parties to comment on the *Preliminary Results.* On September 9, 2009, we received a case brief from TPBG. On September 10, 2009, we received a case brief from the Polyethylene Retail Carrier Bag Committee and its individual members, Hilex Poly Co., LLC, and Superbag Corporation (collectively, the petitioners). On September 14, 2009, we received a rebuttal brief from TPBG. On September 15, 2009, we received a rebuttal brief from the petitioners. We did not hold a hearing as none was requested.

We have conducted this review in accordance with section 751(a) of the Tariff Act of 1930, as amended (the Act).

Scope of the Order

The merchandise subject to the antidumping duty order is polyethylene retail carrier bags (PRCBs) which may be referred to as t-shirt sacks, merchandise bags, grocery bags, or checkout bags. The subject merchandise is defined as non-sealable sacks and bags with handles (including drawstrings), without zippers or integral extruded closures, with or without gussets, with or without printing, of polyethylene film having a thickness no greater than 0.035 inch (0.889 mm) and no less than 0.00035 inch (0.00889 mm), and with no length or width shorter than 6 inches (15.24 cm) or longer than 40 inches (101.6 cm). The depth of the bag may be shorter than 6 inches but not longer than 40 inches (101.6 cm).

PRCBs are typically provided without any consumer packaging and free of charge by retail establishments, *e.g.,* grocery, drug, convenience, department, specialty retail, discount stores, and restaurants, to their customers to package and carry their purchased products. The scope of the order excludes (1) polyethylene bags that are not printed with logos or store names and that are closeable with drawstrings made of polyethylene film and (2) polyethylene bags that are packed in consumer packaging with printing that refers to specific end-uses other than packaging and carrying merchandise from retail establishments, *e.g.,* garbage bags, lawn bags, trash-can liners.

As a result of recent changes to the Harmonized Tariff Schedule of the United States (HTSUS), imports of the subject merchandise are currently classifiable under statistical category 3923.21.0085 of the HTSUS. Furthermore, although the HTSUS subheading is provided for convenience and customs purposes, the written description of the scope of the order is dispositive.

Use of Adverse Facts Available

In the *Preliminary Results* and pursuant to section 776(a) of the Act, we determined that, because Master Packaging significantly impeded this proceeding by failing to respond to our antidumping questionnaire, it was necessary to use facts otherwise available to establish a dumping margin for Master Packaging. *See Preliminary Results,* 74 FR at 39930. Moreover, pursuant to section 776(b) of the Act, we determined that it was appropriate to use an adverse inference with respect to Master Packaging. Id. No party commented on the Department's preliminary determination with respect to Master Packaging. Accordingly, for these final results we have continued to apply adverse facts available to establish a dumping margin for Master Packaging. For the reasons explained in the *Preliminary Results,* we have applied 122.88 percent as adverse facts available to Master Packaging.

Duty Absorption

In the preliminary results of this administrative review, pursuant to section 751(a)(4) of the Act, the Department found that Master Packaging absorbed antidumping duties on all U.S. sales. *See Preliminary Results,* 74 FR at 39929. Master Packaging did not present evidence to rebut the presumption that unaffiliated customers in the United States will not pay the full duty ultimately assessed on the subject merchandise. Thus, for the final results of this review, we continue to find that Master Packaging absorbed antidumping duties.

Analysis of Comments Received

All issues raised in the case briefs by parties to this review are addressed in the Issues and Decision Memorandum for the Antidumping Duty Administrative Review of Polyethylene Retail Carrier Bags from Thailand for the Period of Review August 31, 2007, through July 31, 2008 (Decision Memo), which is dated concurrently with this notice, and hereby adopted by this notice. A list of the issues which parties have raised and to which we have responded is in the Decision Memo and attached to this notice as an Appendix. The Decision Memo, which is a public document, is on file in the Department's Central Records Unit (CRU) of the main Commerce building, Room 1117, and is accessible on the Web at *http://*

ia.ita.doc.gov/frn/index.html. The paper copy and electronic version of the Decision Memorandum are identical in content.

Changes Since the Preliminary Results

For TPBG, we excluded packing expenses from the cost-of-goods-sold denominator we used in our calculations of both the general and administrative (G&A) and financial-expense ratios. Because the record evidence does not include a detailed description of TPBG's inventory-valuation loss, pursuant to section 776(a) of the Act, we have estimated the portion of the loss which is attributable to finished goods by applying the ratio of ending finished goods to total ending inventory. We have included the portion of the loss which is not attributable to finished goods in TPBG's G&A expenses. Additionally, because the record does not indicate the portion of TPBG's interest income which is attributable to short-term interest-bearing assets, pursuant to section 776(a) of the Act, we have estimated the amount of interest income which is attributable to short-term interest-bearing assets by applying the ratio of short-term interest-bearing assets to total interest-bearing assets. We have used the amount of interest income attributable to short-term interest-bearing assets as an offset to TPBG's financial expenses. We have applied TPBG's revised G&A and financial expense factors to TPBG's costs as reallocated for the *Preliminary Results.* Finally, we have applied the major-input adjustment to TPBG's total cost of manufacturing and corrected a ministerial error.

Sales Below Cost in the Home Market

For these final results of review, the Department disregarded home-market sales by TPBG that failed the cost-of-production test.

Final Results of Review

As a result of our review, we determine that the following percentage weighted-average dumping margins exist on PRCBs from Thailand for the period August 1, 2007, through July 31, 2008:

Producer/exporter	Margin (percent)
TPBG	21.99
Master Packaging	122.88

Assessment Rates

The Department shall determine, and U.S. Customs and Border Protection (CBP) shall assess, antidumping duties on all appropriate entries.

We calculated importer/customer-specific duty-assessment amounts with respect to export-price sales by TPBG in the following manner. We divided the total dumping margins (calculated as the difference between normal value and the export price) for each importer or customer by the total number of units TPBG sold to that importer or customer. We will direct CBP to assess the resulting per-unit dollar amount against each unit of merchandise on each of that importer's or customer's entries during the period of review. *See* 19 CFR 351.212(b)(1). Where the assessment amount is above *de minimis,* we will instruct CBP to assess duties on all entries of subject merchandise by that importer or customer.

The Department clarified its ''automatic assessment'' regulation on May 6, 2003. *See Antidumping and Countervailing Duty Proceedings: Assessment of Antidumping Duties,* 68 FR 23954 (May 6, 2003) (*Assessment-Policy Notice*). This clarification will apply to entries of subject merchandise during the period of review produced by TPBG for which it did not know that the merchandise it sold to an intermediary (*e.g.,* a reseller, trading company, or exporter) was destined for the United States. In such instances, we will instruct CBP to liquidate unreviewed entries at the all-others rate if there is no rate for the intermediary(ies) involved in the transaction. *See Assessment-Policy* Notice for a full discussion of this clarification.

Because we are relying on total adverse facts available to establish the dumping margin for Master Packaging, we will instruct CBP to apply a dumping margin of 122.88 percent to all entries of subject merchandise produced and/or exported by Master Packaging.

The Department intends to issue assessment instructions to CBP 15 days after the date of publication of these final results of review.

Cash-Deposit Requirements

The following deposit requirements will be effective upon publication of this notice of final results of administrative review for all shipments of the subject merchandise entered, or withdrawn from warehouse, for consumption on or after the date of publication, consistent with section 751(a)(1) of the Act: (1) The cash-deposit rates for the reviewed companies will be the rates shown above; (2) for previously investigated or reviewed companies not listed above, the cash-deposit rate will continue to be the company-specific rate published for the most recent period; (3) if the exporter is not a firm covered in this or a previous review or the original less-than-fair-value (LTFV) investigation but the manufacturer is, the cash-deposit rate will be the rate established for the most recent period for the manufacturer of the merchandise; (4) the cash-deposit rate for all other manufacturers or exporters will continue to be 2.80 percent, the all-others rate from the amended final determination of the LTFV investigation published on July 15, 2004. *See Notice of Amended Final Determination of Sales at Less Than Fair Value: Polyethylene Retail Carrier Bags From Thailand,* 69 FR 42419 (July 15, 2004).

These deposit requirements shall remain in effect until further notice.

Notification Requirements

This notice serves as a reminder to importers of their responsibility under 19 CFR 351.402(f) to file a certificate regarding the reimbursement of antidumping duties prior to liquidation of the relevant entries during this review period. Failure to comply with this requirement could result in the Department's presumption that reimbursement of antidumping duties occurred and the subsequent assessment of doubled antidumping duties. See id.

This notice also serves as a reminder to parties subject to administrative protective order (APO) of their responsibility concerning the disposition of proprietary information disclosed under APO in accordance with 19 CFR 351.305(a)(3). Timely notification of the destruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and the terms of an APO is a sanctionable violation.

We are issuing and publishing these results in accordance with sections 751(a)(1) and 777(i) of the Act and 19 CFR 351.221(b)(5).

Dated: December 7, 2009.

Carole A. Showers,

Acting Deputy Assistant Secretary for Import Administration.

Appendix

1. Conversion-Cost Reallocation
2. Cost of Goods Sold
3. General and Administrative Expenses
4. Offset for Interest Income
5. Total Production Quantities
6. Major-Input Adjustment
7. Clerical Error

[FR Doc. E9–29597 Filed 12–10–09; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

National Institute of Standards and Technology

[Docket No.: [070321067–91333–02]

Announcing Revised Draft Federal Information Processing Standard (FIPS) 140–3, Security Requirements for Cryptographic Modules

AGENCY: National Institute of Standards and Technology (NIST), Commerce.

ACTION: Notice; request for comments.

SUMMARY: The National Institute of Standards and Technology (NIST) announces the Revised Draft Federal Information Processing Standard 140–3, Security Requirements for Cryptographic Modules, for public review and comment. The draft standard, designated ''Revised Draft FIPS 140–3,'' is proposed to supersede FIPS 140–2.

DATES: Comments must be received on or before March 11, 2010.

ADDRESSES: Written comments may be sent to: Chief, Computer Security Division, Information Technology Laboratory, Attention: Dr. Michaela Iorga, 100 Bureau Drive, Mail Stop 8930, National Institute of Standards and Technology, Gaithersburg, MD 20899–8930. Electronic comments may also be sent to: *FIPS140–3@nist.gov.* The proposed revised standard can be reviewed electronically at *http://csrc.nist.gov/publications/PubsDrafts.html.* The complete set of all comments received in response to the July 2007 notice and NIST's responses to these comments may be accessed at *http://csrc.nist.gov/groups/ST/documents/CommentsFIPS140–3_draft1.pdf.* The current FIPS 140–2 standard can be found at: *http://csrc.nist.gov/publications/PubsFIPS.html.*

FOR FURTHER INFORMATION CONTACT: Dr. Michaela Iorga, Computer Security Division, 100 Bureau Drive, Mail Stop 8930, National Institute of Standards and Technology, Gaithersburg, MD 20899–8930, Telephone (301) 975–8431.

SUPPLEMENTARY INFORMATION: FIPS 140–1, Security Requirements for Cryptographic Modules, was issued in 1994 and was superseded by FIPS 140–2 in 2001. FIPS 140–2 identifies requirements for four security levels for cryptographic modules to provide for a wide spectrum of data sensitivity (*e.g.,* low value administrative data, million dollar funds transfers, and life protecting data), and a diversity of application environments.

Under NIST's Cryptographic Module Validation Program (CMVP), over 2000 modules have been tested by accredited private-sector laboratories and validated as conforming to FIPS 140–1 and FIPS 140–2. FIPS 140–2 provided that it be reviewed within five years to address new and revised requirements that might be needed to meet technological and economic changes.

In 2005, NIST announced that it planned to develop FIPS 140–3 and solicited public comments on new and revised requirements for cryptographic systems. On January 12, 2005, a notice was published in the **Federal Register** (70 FR 2122), soliciting public comments on a proposed revision of FIPS 140–2. The comments received by NIST supported reaffirmation of the standard, but suggested technical modifications to address advances in technology that had occurred after the standard had been approved. Using these comments, NIST prepared a Draft FIPS 140–3 (hereafter referred to as the ''2007 Draft''), which was announced for review and comment in the **Federal Register** (72 FR 38566) on July 13, 2007. NIST developed the Revised Draft FIPS 140–3 that is announced in this notice using the comments received in response to the July 13, 2007 notice and the feedback on requirements for software cryptographic modules obtained during the March 18, 2008 FIPS 140–3 Software Security Workshop organized by NIST.

Comments and questions regarding the 2007 Draft were submitted by approximately 45 entities, including two U.S. federal government organizations, two government organizations of other countries, thirty private sector and research organizations, ten private individuals, and one or more anonymous reviewers. These comments have all been made available by NIST at *http://csrc.nist.gov/groups/ST/documents/CommentsFIPS140–3_draft1.pdf.*

None of the comments opposed the approval of a revised standard. Some comments asked for clarification of the text of the standard or recommended editorial and formatting changes. Other comments suggested modifying requirements, or applying the requirements at a different security level. All of the suggestions, questions and recommendations within the scope of the FIPS revision were carefully reviewed, and changes were made to the standard, where appropriate. Some reviewers submitted questions or raised issues that are related but outside the scope of this FIPS. Comments that were outside of scope of the FIPS revision were deferred for later consideration in the context of the NIST/CMVP supporting documents.

The primary interests and issues that were raised in the comments included implementability, testability, performance, usability and cost. Detailed technical comments covered issues including the following: Authentication mechanisms; non-invasive attacks; random bit generators (RBGs); randomness of Initialization Vectors (IVs); operating system requirements; zeroization; status indicators; issues regarding the cryptographic module boundary and computing environment; and issues pertaining to self-testing requirements.

The following is a summary and analysis of the comments received and NIST's responses to them:

Comment: The 2007 Draft required the module to directly prevent the selection of weak passwords for password-based authentication mechanisms. Eighteen commenters stated that this requires standardized guidance on weak passwords and Personal Identification Numbers (PINs) and also implies that modules are required to store multi-language dictionaries, which is impractical in many cases.

Response: NIST removed the requirement that the cryptographic module directly prevent selection of weak passwords.

Comment: The 2007 Draft required that default authentication data be unique per module unit delivered if the module employs default authentication data to control access to the module for first-time authentication. Six commenters stated that this is an onerous requirement for vendors who deliver high volume products, and is unnecessary given the requirement to change the authentication data upon first use.

Response: NIST removed the requirement that the default authentication data be unique per module unit delivered.

Comment: The 2007 Draft specified Mitigation of Simple Power Analysis (SPA) attacks at Security Level 4. Eight commenters stated that this requirement should be introduced at a lower level (Security Level 2 or 3) for consistency with tamper evidence requirements, with stronger requirements at Security Levels 3 and 4. Similarly, the 2007 Draft specified that Mitigation of Differential Power Analysis (DPA) attacks is required starting with the Security Level 4. Eight commenters stated that this requirement should be introduced at Security Level 2 or 3.

Response: The tamper evidence mechanisms specified at Security Level

2 provide security against an unprepared attacker. While SPA and DPA attacks leave no physical traces of the attack, they require, in addition to access to the module's power line, minimum equipment to collect the data; therefore, the attacker has to be prepared with appropriate equipment. NIST determined that protection against non-invasive attacks is required starting with the Security Level 3 to provide consistent protection for the modules Critical Security Parameters (CSPs).

Comment: Four comments were received about the manual entry and display of Sensitive Security Parameters (SSP), such as passwords. These comments focused on password change operations, since other requirements apply to password entry for authentication.

Response: The standard does not mandate visual verification of SSPs during manual entry; rather, it permits the option that, when SSPs are long and possibly in hexadecimal representation, they may be temporarily displayed to allow visual verification for improved accuracy. This flexibility is retained in the Revised Draft FIPS 140–3. In addition, the concept of the Trusted Channels and its use for input/output of SSPs at Security Levels 3 and 4 is clarified in the Revised Draft FIPS 140–3.

Comment: Twenty-one comments were received regarding conflicts in the specifications pertaining to Random Bit Generator (RBG) entropy sources and difficulties in satisfying the RBG self-testing requirements during conditional self-tests.

Response: NIST considered all comments related to the Random Bit Generator (RBG) Entropy Source Test, and removed the RBG Entropy Source Test from the list of required conditional self-tests in the Revised Draft FIPS 140–3. For consistency, the Revised Draft FIPS 140–3 defines the minimum entropy as the min-entropy defined in NIST SP 800–90, ''Recommendation for Random Number Generation Using Deterministic Random Bit Generators (Revised)'', as amended, and points to it for additional requirements.

Comment: Thirty-one commenters stated that ambiguities in the Operating System Requirements for Modifiable Operational Environments needed to be clarified. Depending on how the various terms were interpreted these requirements might be impossible to satisfy.

Response: The entire section 4.5.1 ''Operating System Requirements for Modifiable Operational Environments'' has been re-written to improve clarity.

Comment: Three comments were received indicating that thorough review of the 2007 Draft required access to all annexes pertaining to the standard.

Response: All annexes (A through F) pertaining to the Revised Draft FIPS 140–3 have been made available for concurrent review with the Revised Draft FIPS.

Comment: One comment was received recommending a key status indicator to show whether the module is keyed, not keyed, or zeroized.

Response: The Revised Draft FIPS requires a physical or logical status indicator, but only for self-tests and error states.

Comment: Two comments were received noting that zeroization for physical security reasons must occur in a sufficiently small time period to prevent the recovery of sensitive data, but no such constraints were indicated in the 2007 Draft.

Response: NIST updated the Revised Draft FIPS to specify that zeroization shall be immediate and non-interruptible and shall occur in a sufficiently small time period so as to prevent the recovery of the sensitive data between the time zeroization is initiated and the actual zeroization completed.

Comment: Two comments were received stating that operating system requirements disallowed most debuggers and suggested an exception for maintenance mode.

Response: NIST restored the maintenance role and allowed debuggers when operating in maintenance mode. The operating system shall prevent all operators and running processes from modifying running cryptographic processes (*i.e.,* loaded and executing cryptographic program images) only when not in the maintenance mode. In this case, running processes refer to all processes, cryptographic or not, not owned or initiated by the operating system (*i.e.,* operator-initiated).

Comment: The 2007 Draft defined the cryptographic module's electrical power as a physical port. Two comments were received regarding the requirements applicable to the power port in order to restrict unintended information flow.

Response: NIST defined a ''power interface'' for the cryptographic module and replaced all references to ''power port'' with ''power interface'' in the Revised Draft FIPS. No additional requirements related to power interfaces were added. Clarifications triggered by questions related to this topic will be addressed in standard's supplementary documentation such as the ''FIPS 140–3 Implementation Guidance''.

Comment: Six comments were received regarding the specified false acceptance rate (FAR) of 1 in 10∧8 for authentication mechanisms in the 2007 Draft, and noted that the 2007 Draft was silent with respect to false rejection rate (FRR). Some comments suggested that the engineering tradeoffs required to achieve an FAR of 10∧8 will have a strongly negative impact on usability.

Response: NIST reviewed the requirements for group authentication mechanism and acknowledges the impact of such requirement on usability and on the FRR of cryptographic modules using multi-factor authentication mechanisms. The requirement was removed from the Revised Draft FIPS and will be addressed in the Implementation Guidance or other supplemental documentation.

Comment: Eleven comments were received regarding the self-testing requirements specified by the 2007 Draft. The commenters considered the requirements inappropriate for devices with aggressive power conservation modes, such as newer portable devices and embedded devices.

Response: NIST reviewed the self-test section and redefined the cases when the pre-operational self-tests must be performed.

Comment: One comment was received highlighting a conflict between self-tests for random bit generators (RBGs) and NIST Special Publication (SP) 800–90.

Response: NIST reviewed the self-test section and removed the conflicting requirement from the continuous RBG test section of the draft.

In addition to the public comment period, NIST hosted a public workshop on March 18, 2008 to obtain additional feedback on requirements for software crypto modules. The FIPS 140–3 Software Security Workshop addressed a range of topics, including the following: single user mode at Security Level 1; the logical boundary of a software module; the modifiable operational environment; audit logs; software integrity tests; ''firmware'' modules; security strength of a crypto module; and the number of security levels for software modules. Based on the combination of public comments and the discussions at the FIPS 140–3 Software Security Workshop, NIST implemented further changes to rationalize and simplify the security levels in the Revised Draft FIPS 140–3. In particular, the Revised Draft FIPS 140–3 specifies four security levels instead of five, reintroduces the notion of firmware cryptographic module and

defines the security requirements for it, limits the overall security level for software cryptographic modules of Security Level 2, and removes the formal model requirement.

The following significant substantive differences between this Revised Draft FIPS 140–3 and the current FIPS 140–2 standard are noted: Inclusion of a separate section for software security; limiting the overall security level for software cryptographic modules of Security Level 2; requirement for modules to mitigate against the non-invasive attacks when validating at higher security levels; introduction of the concept of public security parameters; allowing modules to defer various self-tests until specified conditions are met; removing the formal model requirement; and strengthening the requirements for integrity testing.

The Revised Draft FIPS 140–3 can be found at *http://csrc.nist.gov/publications/PubsDraft.html,* and is available for public review and comment.

Prior to the submission of this proposed revised standard to the Secretary of Commerce for review and approval, it is essential that consideration is given to the needs and views of the public, users, the information technology industry, and Federal, State and local government organizations. The purpose of this notice is to solicit such views.

Authority: Federal Information Processing Standards (FIPS) are issued by the National Institute of Standards and Technology after approval by the Secretary of Commerce pursuant to Section 5131 of the Information Technology Management Reform Act of 1996 and the Federal Information Security Management Act of 2002 (Pub. L. 107–347).

E.O. 12866: This notice has been determined not be significant for the purpose of E.O. 12866.

Dated: December 7, 2009.

Patrick Gallagher,

Director.

[FR Doc. E9–29567 Filed 12–10–09; 8:45 am]

BILLING CODE 3510–13–P

DEPARTMENT OF COMMERCE

International Trade Administration

Mission Statement; Solar Energy Trade Mission to India, February 15–19, 2010

AGENCY: Department of Commerce.

ACTION: Amendment.

Mission Description

The United States Department of Commerce, International Trade Administration, U.S. and Foreign Commercial Service (CS), is organizing the second Solar Energy Trade Mission to India from February 15 to 19, 2010. Led by a senior Department of Commerce official, the mission will continue to build on the Department's efforts to open the burgeoning Indian solar market to U.S. firms and to position U.S. companies to seize export opportunities as India gears up to rapidly expand its solar energy capabilities. Ideal trade mission participants will be representatives of leading U.S. manufacturers of solar technology, including utility-scale technologies such as photovoltaic and concentrated solar power, and manufacturers of products such as solar street lighting, solar home lighting, and solar water pumping systems. The mission will also be open to a limited number of representatives of trade associations, councils and groups in the solar energy sector. The mission will visit three cities: New Delhi, Bangalore, and Mumbai, where participants will receive market briefings and meet with key government decision makers and prospective private sector partners during customized, one-on-one meetings.

Commercial Setting

India is facing a critical shortage of energy. Due to its sustained economic growth, the country suffers from an energy deficit, which stands to worsen as India's economy and population continue to grow. As a result of the energy shortage, Indian consumers face frequent periods of power outages, and prices for electricity are high. In addition to the need for more capacity, the Indian government at both state and national levels has begun to recognize the threat posed by global climate change. As such, the Government of India (GOI) acknowledges that some of the country's energy needs must be met with cleaner sources of power. All of these issues have compelled the GOI to move forward with an action plan to address its energy needs.

In 2008, the GOI released its National Action Plan on Climate Change (NAPCC), part of which addressed energy needs and particularly focused on solar energy as an area of development. Concurrent with the development of the NAPCC, three Indian states—Rajasthan, Gujarat, and Karnataka—have progressively launched their own efforts to develop solar projects. Since the NAPCC was initially released, CS India has aggressively worked to facilitate the development of the nascent Indian solar market, focusing on the aforementioned states. In March 2009 the first U.S. Solar Energy Trade Mission to India took place, which brought 14 U.S. companies to India, along with Deputy Assistant Secretarial leadership from the Departments of Commerce and Energy, and a board member from the U.S. Export-Import Bank. The mission successfully introduced U.S. solar energy technology to relevant Indian officials, and, as a result of the mission, U.S. firms have signed memoranda of understanding to develop 5MW solar projects in Rajasthan. Prior to this trade mission Indian officials acknowledged that they were not familiar with U.S. solar technologies, and that they believed European firms had more proven products. The trade mission helped to highlight the strength and cost effectiveness of U.S. technologies—a crucial step for positioning U.S. firms in this market.

As a follow-up to the first trade mission, in July 2009 CS India organized a solar finance roundtable in Mumbai, which brought together key government decision makers from Rajasthan, project finance bankers, and two U.S. energy developers. Lack of project finance options had emerged as a stumbling block to the development of utility-scale solar power projects in Rajasthan. Roundtable participants addressed critical issues such as power purchase agreements, renewable energy purchase obligations, transmission line issues and tariff structures, and the Rajasthan government officials confirmed that they would put the policy mechanisms in place to make the solar projects financially viable.

Building on the positive momentum to date, CS India approached the U.S. Trade and Development Agency to fund an orientation visit to the U.S. by officials from Rajasthan. The visit, which will take place during October 2009, will coincide with Solar Power International, the largest solar industry trade show in the United States. By attending this show the Indian officials will be exposed to the variety and depth of U.S. solar technologies, and they will visit demonstration sites to see firsthand the integration of solar energy into the U.S. power grid.

The second Solar Trade Mission to India will continue to build on the above efforts and will help keep U.S. firms at the forefront of this emerging market. In particular, the mission will continue CS India's extensive efforts to positively influence policy and will allow U.S. manufacturers to weigh in with Indian officials as crucial government decisions are soon to be made that will impact the direction this market will take.

The GOI is poised to release its highly anticipated National Solar Plan, which will outline new government initiatives aimed at developing solar energy projects. While details of this plan are still being finalized, it is expected to mandate at least 20,000MW of solar energy generation by 2020, and up to 200,000MW by 2050, and will offer government funding and incentives toward that end. The plan will also mandate installation of solar rooftop panels for 10,000 government buildings, in addition to installing household rooftop solar units in one million homes by 2020.

Price considerations for solar energy have been and will continue to be an issue, yet some estimates indicate that solar energy prices will reach parity with conventional energy sources in as little as three years. Anticipated price parity, coupled with the expected government incentives, make it even more urgent that U.S. solar firms establish themselves in India right now.

The second Solar Trade Mission to India will expose participants to key officials from the states most ready to move forward on solar projects, as outlined below.

Rajasthan

The state of Rajasthan is deploying a broad, ambitious solar energy development framework. According to studies conducted by the U.S. Department of Energy, Rajasthan receives the second largest amount of solar radiation in the world. State officials have long recognized the viability of solar for their energy needs, and they are finalizing plans to erect numerous utility-scale projects throughout the state. In support of these goals, the state is preparing to formalize the critical government policies that are needed to catapult these projects off the drawing board. Such policies will include: land availability secured by the government; guaranteed assistance with transmission lines and interconnection; and, power purchase agreements ensuring that all power produced by solar projects will be purchased at pre-determined rates. Projects totaling 56MW have been allocated to different developers, including two separate 5MW projects to U.S. developers. In addition, the Asian Development Bank is funding construction of a 50MW solar project in the state, and this project will be open to competitive bidding. The state has a long-term vision to establish itself as a global hub for solar energy production, and it is important that U.S. firms are present as this market moves forward. Opportunities for U.S. exports associated with these projects will include concentrated solar power technologies, photovoltaic equipment, rooftop solar installations, and household solar photovoltaic equipment.

Gujarat

After Rajasthan, the state of Gujarat receives the second largest amount of solar radiation in India. Gujarat state officials are moving quickly to facilitate the development of solar energy projects, and in August 2009 they approved a range of projects totaling 716MW allocated to thirty-four different project developers, four of which are U.S. firms. Because these allocations have recently been made, time is of the essence. Many of the project developers are still in the process of selecting their technical partners, and U.S. firms will lose out to European competitors if they are not here soon to cultivate these partnerships. In support of the above solar efforts, Gujarat will develop the appropriate power purchase agreements and price guarantees, and will guarantee to lay power lines from the solar substations to the main grid. Land is already being set aside for these projects. Gujarat will also mandate that ten percent of all power purchased in the state must be from renewable sources, all of which will help develop the nascent solar industry. Opportunities for U.S. exports associated with these projects will include: concentrated solar power technologies, photovoltaic equipment, rooftop solar installations, and household solar photovoltaic equipment.

Karnataka

The State of Karnataka leads the country for solar applications. Bangalore has the largest deployment of rooftop solar water heaters in the country, generating a daily equivalent of 200 MW, with 60% of the city's household and industrial units using solar water heaters. The Government of Karnataka (through the Karnataka Renewable Energy Development Limited—KREDL) has made roof-top thermal systems mandatory for all new residential/industrial structures and has implemented a Rs 50 (about $1.10) discount (subsidy) for the monthly electric bill from the Bangalore Electric Supply Company. KREDL is also setting up two demonstration projects of 3MW and 5MW in North and South Bangalore for grid-connected solar power systems, which will be India's first grid-connected solar projects. In addition to these measures, the Karnataka state government plans to install solar panels in major state buildings and public utilities. Under the recently-announced solar city project, the state government is planning to install photovoltaic panels with a capacity of 2–5 KW on rooftops of over 10,000 houses, for residential use with the leftover energy to be pumped to the state grid. Moreover, with its thriving semiconductor industry, experts predict that Bangalore will become a solar hub in India. Finally, KREDL just invited more bids from solar technology providers to design, finance, build, operate and maintain solar/hybrid power plants and collect user fees to provide solar energy on a sustainable basis for the requirement of village clusters.

Maharashtra

The state of Maharashtra, home to the city of Mumbai, stands as India's commercial and industrial powerhouse. State officials have set an ambitious renewable energy purchase target of ten percent. Some of this energy will be generated through solar technologies, and the state recently announced its intent to develop a 10MW solar thermal power plant. The GOI also plans to install solar rooftop systems in households and government buildings nationwide, and many firms that will implement this plan are located in Maharashtra, making it an ideal venue to promote U.S. solar rooftop technologies. Export opportunities in Maharashtra include solar thermal systems and rooftop solar energy units.

Mission Goals

The goals of the second Solar Energy Trade Mission to India are to help U.S. solar technology companies initiate or expand their exports to India by providing introductions to industry representatives and potential partners, and by providing networking opportunities, policy discussions with the central and state governments, and current market information.

Mission Scenario

The mission will begin in New Delhi, where participants will meet with officials from the state of Rajasthan and potential private sector partners. Next, the participants will visit Bangalore, where they will meet with energy sector entrepreneurs and officials from the state of Karnataka. The final stop on the mission will be Mumbai, where participants will meet with government and private sector representatives from the states of Gujarat and Maharashtra, as well as leading Mumbai bankers who are familiar with the solar market and interested in providing project finance. The participants will also attend policy

briefings by U.S. Embassy officials, market and commercial briefings by the CS, and networking events offering further opportunities to speak with local business and government representatives. U.S. participants will be counseled before and after the mission by CS India staff. Participation in the mission will include the following:

- Pre-travel briefings/webinar on subjects ranging from business practices in India to security;
- Pre-scheduled meetings with potential partners, distributors, end users, or other local industry contacts in New Delhi, Bangalore, and Mumbai;
- Airport transfers in New Delhi, Bangalore, and Mumbai;
- Meetings with Indian government officials; and,
- Participation in networking receptions in New Delhi, Bangalore, and Mumbai.

PROPOSED MISSION TIMETABLE

Sunday, February 14, 2010	New Delhi • Delegates arrive in New Delhi/check-in and rest overnight.
Monday, February 15, 2010	New Delhi • Embassy Briefing. • Meetings with Central Government Officials. • Meetings with officials from the state of Rajasthan. • Business matchmaking sessions. • Networking reception.
Tuesday, February 16, 2010	New Delhi/Bangalore • Business matchmaking sessions in New Delhi. • Travel to Bangalore. • Networking reception in Bangalore.
Wednesday, February 17, 2010	Bangalore/Mumbai • CS Bangalore market briefing. • Meetings with officials from the state of Karnataka. • Business matchmaking sessions. • Late evening travel to Mumbai.
Thursday, February 18, 2010	Mumbai • CS Mumbai market briefing. • Meetings with officials from the state of Maharashtra. • Meetings with officials from the state of Gujarat. • Meetings with project finance bankers. • Business matchmaking sessions. • Networking reception.
Friday, February 19, 2010	Mumbai • Business matchmaking session ½ day. • Departure for the U.S.

Participation Requirements

All persons interested in participating in the Solar Trade Mission to India must complete and submit an application package for consideration by the Department of Commerce. All applicants will be evaluated on their ability to meet certain conditions and best satisfy the selection criteria as outlined below. A minimum of 8 and a maximum of 15 organizations will be selected to participate in the mission from the applicant pool. U.S. companies already doing business in India as well as U.S. companies seeking to enter the Indian market for the first time are encouraged to apply. U.S. trade councils, associations or groups in the solar energy sector may also apply to participate in the mission.

Fees and Expenses

After a company or trade organization has been selected to participate in the mission, a payment to the Department of Commerce in the form of a participation fee is required. The participation fee will be $5,200 for large firms and organizations and $4,500 for a small or medium-sized enterprise (SME) or small organization, which will cover one representative.[1] The fee for each additional firm representative (large firm or SME) is $750. Expenses for travel, lodging, most meals, and incidentals will be the responsibility of each mission participant.

Conditions for Participation

- An applicant must submit a completed and signed mission application and supplemental application materials, including adequate information on the company's products and/or services, primary market objectives, and goals for participation.
- Each applicant must also certify that the products and services it seeks to export through the mission are either produced in the United States, or, if not, marketed under the name of a U.S. firm and have at least fifty-one percent U.S. content.

Selection Criteria

- Suitability of the applicant's products or services to the Indian market and targeted sector
- Applicant's potential for business in India, including likelihood of U.S. exports resulting from the mission
- Consistency of the applicant's goals and objectives with the stated scope of the mission
- Past or current export activity or ability to initiate and sustain immediate export activities

Any partisan political activities (including political contributions) of an applicant are entirely irrelevant to the selection process.

Timeframe for Recruitment and Applications

Mission recruitment will be conducted in an open and public manner, including publication in the **Federal Register**, posting on the Commerce Department trade mission

[1] An SME is defined as a firm with 500 or fewer employees or that otherwise qualifies as a small business under SBA regulations (see *http://www.sba.gov/services/contracting opportunities/sizestandardstopics/index.html*). Parent companies, affiliates, and subsidiaries will be considered when determining business size. The dual pricing reflects the Commercial Service's user fee schedule that became effective May 1, 2008 (see *http://www.export.gov/newsletter/march2008/initiatives.html* for additional information).

calendar (*http://www.ita.doc.gov/doctm/tmcal.html)* and other Internet Web sites, press releases to general and trade media, direct mail, notices by industry trade associations and other multiplier groups, and publicity at industry meetings, symposia, conferences, and trade shows. CS India will work in conjunction with the CS Pacific South Network, which will serve as a key facilitator in establishing strong commercial ties to the U.S. solar industry nationwide. Recruitment for the mission will begin immediately and conclude no later than December 31, 2009. Applications received after December 31, 2009, will be considered only if space and scheduling constraints permit.

Contacts

U.S. Commercial Service India:

Ms. Preetha Nair, U.S. Commercial Service, New Delhi, Tel: 91–11–23472347, E-mail: *Preetha.Nair@mail.doc.gov,*

Mr. Vaidyanathan Purushothaman, U.S. Commercial Service, Chennai, Tel: 91–44–28574031, E-mail: *Vaidya nathan.Purushothaman@mail.doc.gov.*

Mr. P. Srinivas, U.S. Commercial Service, Mumbai, Tel: 91–22–22652511, E-mail: *P.Srinivas@mail.doc.gov.*

U.S. Commercial Service Export Assistance Centers:

Ms. Cynthia Torres, U.S. Commercial Service, Coachella Valley (Indio), Tel: 760–342–1310, *E-mail: cynthia.torres@mail.doc.gov.*

Mr. Richard Swanson, Pacific South Network Director, Newport Beach, Tel: 949–660–1688, ext. 153, E-mail: *Richard.swanson@mail.doc.gov.*

Sean Timmins,

Global Trade Programs, Commercial Service Trade Missions Program.

[FR Doc. E9–29557 Filed 12–10–09; 8:45 am]

BILLING CODE 3510–FP–P

COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED

Procurement List; Proposed Additions

AGENCY: Committee for Purchase From People Who Are Blind or Severely Disabled.

ACTION: Proposed additions to Procurement List.

SUMMARY: The Committee is proposing to add to the Procurement List products and services to be provided by the nonprofit agency employing persons who are blind or have other severe disabilities.

Comments Must be Received On or Before: 1/11/2010.

ADDRESSES: Committee for Purchase From People Who Are Blind or Severely Disabled, Jefferson Plaza 2, Suite 10800, 1421 Jefferson Davis Highway, Arlington, Virginia 22202–3259.

FOR FURTHER INFORMATION CONTACT: Patricia Briscoe, Telephone: (703) 603–7740, Fax: (703) 603–0655, or e-mail *CMTEFedReg@AbilityOne.gov*.

SUPPLEMENTARY INFORMATION: This notice is published pursuant to 41 U.S.C. 47(a)(2) and 41 CFR 51–2.3. Its purpose is to provide interested persons an opportunity to submit comments on the proposed action.

Additions

If the Committee approves the proposed additions, the entities of the Federal Government identified in this notice for the products and services will be required to procure the products and services listed below from the nonprofit agencies employing persons who are blind or have other severe disabilities.

Regulatory Flexibility Act Certification

I certify that the following action will not have a significant impact on a substantial number of small entities. The major factors considered for this certification were:

1. If approved, the action will not result in any additional reporting, recordkeeping or other compliance requirements for small entities other than the small organizations that will provide the products and services to the Government.

2. If approved, the action will result in authorizing small entities to provide the products and services to the Government.

3. There are no known regulatory alternatives which would accomplish the objectives of the Javits-Wagner-O'Day Act (41 U.S.C. 46–48c) in connection with the products and services proposed for addition to the Procurement List.

Comments on this certification are invited. Commenters should identify the statement(s) underlying the certification on which they are providing additional information.

End of Certification

The following products and services are proposed for addition to Procurement List to be performed by the nonprofit agencies listed:

Products

Advanced Combat Shirt

NSN: 8415–01–548–7187.
NSN: 8415–01–548–7201.
NSN: 8415–01–548–7206.
NSN: 8415–01–548–7209.
NSN: 8415–01–548–7215.
NSN: 8415–01–548–7232.
NSN: 8415–01–548–7236.
NPAs: Winston-Salem Industries for the Blind, Winston-Salem, NC. San Antonio Lighthouse for the Blind, San Antonio, TX .
Contracting Activity: DEPT OF THE ARMY, XR W2DF RDECOM ACQ CTR NATICK, MA.
Coverage: C-List for total of the requirements of Research, Development and Engineering Command (RDECOM), Natick, MA.

Services

Service Type/Location: Service Type: Mess Attendant Services and Contingency Cooks, Malmstrom Air Force Base, MT.
NPA: Skils'kin, Inc., Spokane.
Contracting Activity: Dept of the Air Force/AFGSC 341 CCS/LGCB, Malmstrom Air Force Base, MT.

Service Type/Locations: Document Destruction Service.
NPA: NISH (Prime Contractor).
Contracting Activity: Dept. of the Treasury/Internal Revenue Service, Washington, DC.

IRS Offices at the Following Locations

2385 CHAMBLEE TUCKER ROAD, CHAMBLEE, GA
J GORDON LOW BLDG: 120 BARNARD ST, SAVANNAH, GA
401 W PEACHTREE ST, ATLANTA, GA
600 EAST FIRST ST, ROME, GA
RICHARD B. RUSSELL FB: 75 SPRING ST, ATLANTA, GA
R. G. STEPHENS JR FB: 355 HANCOCK AVENUE, ATHENS, GA
4800 BUFORD HIGHWAY, CHAMBLEE, GA
NE KOGER: 2888 WOODCOCK BLVD, ATLANTA, GA
SNAPFINGER TECH: 5240 SNAPFINGER PARK DR, DECATUR, GA
2970 BRANDYWINE RD, ATLANTA, GA
2980 BRANDYWINE RD, ATLANTA, GA
ATSC TRAINING: 2965 FLOWERS RD, CHAMBLEE, GA
2400 HERODIAN WAY, SMYRNA, GA
FIRST FEDERAL PLAZA: 777 GLOUCESTER ST, BRUNSWICK, GA
2743 PERIMETER PKWY, AUGUSTA, GA
233 PEACHTREE ST, ATLANTA, GA
6655 PEACHTREE DUNWOODY RD NE, ATLANTA, GA
329 OAK STREET, GAINESVILLE, GA
1008 PROFESSIONAL BLVD., DALTON, GA
6600 BAY CIRCLE, NORCROSS, GA
640 NORTH AVENUE, MACON, GA
33 E. TWOHIG AVE, SAN ANGELO,TX
6801 SANGER AVE, WACO, TX
5219 MCPHERSON RD, LAREDO, TX
601 NW LOOP 410 ACCESS RD, SAN ANTONIO, TX
415 S. First Street, LUFKIN, TX
216 W. 26TH STREET, BRYAN, TX
3525 NORTHEAST PARKWAY, SAN ANTONIO, TX

8700 TESORO DRIVE, SAN ANTONIO, TX
1205 TEXAS AVE, LUBBOCK, TX
100 N. E. LOOP 410, SAN ANTONIO, TX

NPA (Subcontractor): Austin Task, Inc., Austin, TX

915 Lafayette Blvd, Bridgeport, CT
131 West Street, Danbury, CT
333 East River Drive, East Hartford, CT
Cotter FB: 135 High Street, Hartford, CT
Gaiamo FB: 150 Court St., New Haven, CT
24 Belden Ave, Norwalk, CT
14 Cottage Place, Waterbury, CT
936 Silas Deane Highway, Wethersfield, CT

NPA (Subcontractor): Easter Seals Greater Hartford Rehabilitation Center, Inc., Windsor, CT

2120 CAPITOL AVE, CHEYENNE, WY
Thomas P. O'Niell, JR FB: 10 Causeway ST, Boston, MA
MAIN & EAST ELM ST, BROCKTON, MA
PHILIP J PHILBIN FB: 881 MAIN STREET, FITCHBURG, MA
900 CHELMSFORD STREET, LOWELL, MA
118 TURNPIKE ROAD, SOUTHBOROUGH, MA
120 FRONT STREET, WORCESTER, MA
380 WESTMINSTER ST, PROVIDENCE, RI
60 QUAKER LANE, WARWICK, RI
1250 HANCOCK STREET, QUINCY, MA

NPA (Subcontractor): Cranston Arc, Cranston, RI

29 NORTH WACKER DRIVE, CHICAGO, IL
211 S COURT STREET, ROCKFORD, IL
5100 River Rd., Schiller Park, IL

NPA (Subcontractor): Glenkirk, Northbrook, IL

2 SOUTH MAIN STREET, AKRON, OH
201 CLEVELAND AVE SW, CANTON, OH
1240 E NINTH STREET, CLEVELAND, OH
1375 E NINTH STREET, CLEVELAND, OH
208 PERRY ST, DEFIANCE, OH
5990 W CREEK ROAD, INDEPENDENCE, OH
401 WEST NORTH STREET, LIMA, OH
300 BROADWAY, LORAIN, OH
180 N DIAMOND ST, MANSFIELD, OH
8 NORTH STATE STREET, PAINESVILLE, OH
500 MARKET STREET, STEUBENVILLE, OH
433 NORTH SUMMIT ST, TOLEDO, OH
YOUNGSTOWN FB: 10 EAST COMMERCE ST., YOUNGSTOWN, OH
220 SOUTH MAIN STREET, BUTLER, PA
4314 Old William Penn Highway, MONROEVILLE, PA
1000 Liberty Ave., Pittsburgh, PA
547 KEYSTONE DRIVE, WARRENDALE, PA
162 WEST CHESTNUT STREET, WASHINGTON, PA

NPA (Subcontractor): Weaver Industries, Inc., Akron, OH

505 S. MAIN ST, LAS CRUCES, NM

NPA (Subcontractor): Adelante Development Center, Inc., Albuquerque, NM

625 N. AKERS ST, VISALIA, CA

NPA (Subcontractor): Arc Fresno, Inc., Fresno, CA

3971 RESEARCH PARK DRIVE, ANN ARBOR, MI
22600 HALL ROAD, CLINTON TOWNSHIP, MI
477 MICHIGAN AVE, DETROIT, MI
985 MICHIGAN AVENUE, DETROIT, MI
3100 WEST ROAD, EAST LANSING, MI
38275 WEST TWELVE MILE ROAD, FARMINGTON HILLS, MI
815 S. SAGINAW ST, FLINT, MI
234 LOUIS GLICK HWY, JACKSON, MI
1270 PONTIAC RD, PONTIAC, MI
4901 TOWNE CENTRE RD, SAGINAW, MI

NPA (Subcontractor): The Arc of St. Clair County, Port Huron, MI

300 South New Street, Dover, DE
21309 Berlin Road, Georgetown, DE
1352 Marrows Road, Newark, DE
844 King Street, Wilmington, DE
190 Admiral Cochrane Drive, Suite 170, Annapolis, MD
31 Hopkins Plaza, Baltimore, MD
212 West Main Street, Salisbury, MD
NATIONAL OFFICE: 1111 CONSTITUTION AVE NW, WASHINGTON, DC
500 N CAPITOL ST, WASHINGTON, DC
820 FIRST ST., NE, WASHINGTON, DC
1099 14TH STREET NW, WASHINGTON, DC
1750 PENNSYLVANIA AVENUE, WASHINGTON, DC
US MINT ANNEX: 799 9TH STREET, WASHINGTON, DC
US MINT: 801 9th Street, NW, WASHINGTON, DC
201 THOMAS JOHNSON DR, FREDERICK, MD
14701 National Hwy SW, FROSTBURG, MD
1260 MARYLAND AVENUE, HAGERSTOWN, MD
2345 CRYSTAL DR, STE 400, ARLINGTON, VA
5205 LEESBURG PIKE, BAILEYS CROSSROADS, VA
11166 FAIRFAX BLVD, FAIRFAX, VA
8100 CORPORATE DRIVE, HYATTSVILLE, MD
8401 CORPORATE DRIVE, LANDOVER, MD
5000 ELLIN RD, LANHAM/SEABROOK, MD
6009 OXON HILL, OXON HILL, MD
11510 GEORGIA AVENUE, WHEATON, MD
100 S. CHARLES STREET, BALTIMORE, MD
120 Charles Street, Baltimore, MD

NPA (Subcontractor): Athelas Institute, Inc., Columbia, MD

200 W. PROFESSIONAL PARK CT., BOWLING GREEN, KY
225 E. PEACHTREE ST, CORBIN, KY
7940 KENTUCKY DRIVE, FLORENCE, KY
5 SPIRAL DRIVE, FLORENCE, KY
7125 INDUSTRIAL RD, FLORENCE, KY
10 SPIRAL DRIVE, FLORENCE, KY
121 W TENTH STREET, HOPKINSVILLE, KY
1500 LEESTOWN RD, LEXINGTON, KY
LOU MAZZOLI FB: 600 MARTIN LUTHER KING JR. PLACE, LOUISVILLE, KY
1500 ORMSBY STATION COURT, LOUISVILLE, KY
401 FREDERICA STREET, OWENSBORO, KY
2765 WAYNE SULLIVAN DRIVE, PADUCAH, KY
311 NORTH ARNOLD AVENUE, PRESTONSBURG, KY
300 MADISON AVE, FLORENCE, KY
462 SOUTH 4TH STREET, LOUISVILLE, KY

NPA (Subcontractor): Employment Solutions, Inc., Lexington, KY

233 EAST 84TH DRIVE, MERRILLVILLE, IN
ONE MICHIANA SQUARE, SOUTH BEND, IN
777 RIVERVIEW DRIVE, BENTON HARBOR, MI
678 FRONT STREET NW, GRAND RAPIDS, MI
8075 CREEKSIDE DRIVE, PORTAGE, MI
3251 N EVERGREEN DR NE, GRAND RAPIDS, MI

NPA (Subcontractor): Gateway, Berrien Springs, MI

PRINCE KUHIO FB: 300 ALA MOANA BLVD, HONOLULU, HI
2050 MAIN STREET, WAILUKU, HI

NPA (Subcontractor): Goodwill Contract Services of Hawaii, Inc., Honolulu, HI

600 E. HARRISON ST., BROWNSVILLE, TX
555 NORTH CARANCAHUA ST, CORPUS CHRISTI, TX
320 N MAIN ST, MCALLEN, TX
M L KING JR FB: 312 SOUTH MAIN STREET, VICTORIA, TX

NPA (Subcontractor): Goodwill Industries of South Texas, Inc., Corpus Christi, TX

1901B E CAPITOL DR, APPLETON, WI
440 SECURITY BLVD, GREEN BAY, WI
20 E MILWAUKEE ST. STE 204, JANESVILLE, WI
545 ZOR SHRINE PL, MADISON, WI
515 S. WASHBURN STREET, OSHKOSH, WI
2108 KOHLER MEMORIAL DR., SHEBOYGAN, WI

NPA (Subcontractor): Goodwill Industries of Southeastern Wisconsin, Inc., Milwaukee, WI

611 6TH ST, LOS ANGELES, CA
950 HAMPSHIRE ROAD, THOUSAND OAKS, CA

NPA: Goodwill Industries of Southern California, Los Angeles, CA

520 112TH AVENUE NE, BELLEVUE, WA
3020 RUCKER AVE, EVERETT, WA
402 LEGION WAY SE, OLYMPIA, WA
800 5TH AVE, SEATTLE, WA
1201 PACIFIC AVENUE, TACOMA, WA

NPA (Subcontractor): Northwest Center, Seattle, WA

12 CADILLAC DR., STE 400, BRENTWOOD, TN
5740 UPTAIN RD, CHATTANOOGA, TN
5880 NOLENSVILLE RD, NASHVILLE, TN
701 BROADWAY, NASHVILLE, TN
801 BROADWAY, NASHVILLE, TN
NASHVILLE HQ: 801 BROADWAY, NASHVILLE, TN
NASHVILLE—ANNEX: 801 BROADWAY, NASHVILLE, TN
810 BROADWAY, NASHVILLE, TN
2607 CHARLOTTE AVE—MODULAR 7, NASHVILLE, TN

NPA (Subcontractor): The Orange Grove Center, Inc., Chattanooga, TN

RC WHITE FEDERAL BLDG:700 E. SAN ANTONIO AVE, EL PASO, TX
300 N. MAIN ST, EL PASO, TX

NPA (Subcontractor): ReadyOne Industries, Inc., El Paso, TX

2017 SOUTH LIBERTY DR, BLOOMINGTON, IN

12900 NORTH MERIDAN STREET, CARMEL, IN
2525 CALIFORNIA STREET, COLUMBUS, IN
7409 EAGLE CREST BLVD, EVANSVILLE, IN
1111 SOUTH PARK DRIVE, GREENWOOD, IN
225 N HIGH STREET, MUNCIE, IN
801 WABASH AVE, TERRE HAUTE, IN
201 E. RUDISILL BLVD, FORT WAYNE, IN
955 MEZZANINE DRIVE, LAFAYETTE, IN
7525 EAST 39TH STREET, INDIANAPOLIS, IN

NPA (Subcontractor): Shares Inc., Shelbyville, IN

301 SOUTH PROSPECT ROAD, BLOOMINGTON, IL
1201 N MITSUBISHI MOTORWAY, BLOOMINGTON, IL
310–312 W. CHURCH ST., CHAMPAIGN, IL
306 W ELDORADO STREET, DECATUR, IL
405 SOUTH BANKER STREET, EFFINGHAM, IL
2066 WINDISH DR, GALESBURG, IL
2415 WEST CORNERSTONE CT, PEORIA, IL
3701 EAST LAKE CENTRE DR., QUINCY, IL
3101 CONSTITUTION DRIVE, SPRINGFIELD, IL
1122 T & C COMMONS, CHESTERFIELD, MO
111 CORPORATE OFFICE DR. #145, EARTH CITY, MO
1222 SPRUCE ST, ST LOUIS, MO

NPA (Subcontractor): United Cerebral Palsy of the Land of Lincoln, Springfield, IL

1115 NORTH MADISON AVE, EL DORADO, AR
4905 OLD GREENWOOD RD., FORT SMITH, AR
190 AVIATION PLAZA SUITE C, HOT SPRINGS, AR
615 S MAIN ST, JONESBORO, AR
700 W CAPITOL AVENUE, LITTLE ROCK, AR
100 EAST 8TH AVE, PINE BLUFF, AR
1401 HUDSON LN STE 134, MONROE, LA
3007 KNIGHT ST, SHREVEPORT, LA
3333 S. NATIONAL AVE, SPRINGFIELD, MO
109 S HIGHLAND AVE, JACKSON, TN
MEMPHIS FB: 167 N MAIN ST, MEMPHIS, TN
22 N FRONT ST, MEMPHIS, TN
500 N STATE LINE AVE, TEXARKANA, AR
655 E MILSAP RD, FAYETTEVILLE, AR

NPA (Subcontractor): United Cerebral Palsy of Central Arkansas, Little Rock, AR

1110 MONTLIMAR DR, MOBILE, AL
235 ROOSEVELT AVE., ALBANY, GA
3604 MACON ROAD, COLUMBUS, GA
VALDOSTA FB: 401 NORTH PATTERSON ST, VALDOSTA, GA
202 WEST ADAMS STREET, DOTHAN, AL
125 W ROMANA STREET, PENSACOLA, FL
880 N. REUS STREET, PENSACOLA, FL
651–F WEST 14TH STREET, PANAMA CITY, FL

NPA (Subcontractor): Wiregrass Rehabilitation Center, Inc., Dothan, AL

2120 CAPITOL AVE, CHEYENNE, WY

NPA (Subcontractor): Bayaud Industries, Inc., Denver, CO

300 COUNTRY CLUB RD, EUGENE, OR
GUS J. SOLOMON CTHSE: 620 SW MAIN ST, PORTLAND, OR
E.GREEN—W.WYATT FB: 1220 SW THIRD AVE, PORTLAND, OR
1660 OAK STREET SE, SALEM, OR
500 W 12TH ST, VANCOUVER, WA

NPA (Subcontractor): Garten Services, Inc., Salem, OR

10715 DAVID TAYLOR DRIVE, CHARLOTTE, NC
3308 CHAPEL HILLS BLVD, DURHAM, NC
320 FEDERAL PLACE, GREENSBORO, NC
2303 W MEADOWVIEW ROAD, GREENSBORO, NC
115 5TH AVENUE, NW, HICKORY, NC
4405 BLAND ROAD, RALEIGH, NC
RALEIGH FB: 310 NEW BERN AVENUE, RALEIGH, NC
251 N MAIN STREET, WINSTON SALEM, NC
151 PATTON AVENUE, ASHEVILLE, NC
225 GREEN ST, FAYETTEVILLE, NC
3340 JAECKLE DRIVE, WILMINGTON, NC

NPA (Subcontractor): OE Enterprises, Inc., Hillsborough, NC

1212 CHARLES STREET, BEAUFORT, SC
1 POSTON ROAD, CHARLESTON, SC
1835 ASSEMBLY STREET, COLUMBIA, SC
440 ROPER MOUNTAIN ROAD, GREENVILLE, SC
601 19th AVENUE NORTH, MYRTLE BEACH, SC
401 W EVANS ST, FLORENCE, SC

NPA (Subcontractor): Florence County Disabilities and Special Needs Board, Florence, SC

5799 BROADMOOR ST, MISSION, KS
120 SE 6TH STREET, TOPEKA, KS
271 WEST 3RD STREET NORTH, WICHITA, KS
3720 SOUTH ELIZABETH STREET, INDEPENDENCE, MO
6000 E. GEOSPACE DRIVE, INDEPENDENCE, MO
5800 E BANNISTER ROAD, KANSAS CITY, MO
APPEAL SITE: 2345 GRAND AVE, KANSAS CITY, MO
333 WEST PERSHING ROAD, KANSAS CITY, MO
200 SPACE CENTER DRIVE, LEES SUMMIT, MO

NPA (Subcontractor): Independence and Blue Springs Industries, Inc., Independence, MO

211 N DELAWARE AVE, MASON CITY, IA

NPA (Subcontractor): Harrison County Sheltered Workshop Association, Bethany, MO

4825 COFFEE RD, BAKERSFIELD, CA

NPA (Subcontractor): The Bakersfield Association for Retarded Citizens, Inc., Bakersfield, CA

1534 NORTH BRIDGE ST., CHILLICOTHE, OH
JOHN W PECK FB: 550 MAIN STREET, CINCINNATI, OH
36 E SEVENTH STREET, CINCINNATI, OH
312 ELM ST., CINCINNATI, OH
200 W 2ND ST, DAYTON, OH
70 N. PLAINS ROAD, THE PLAINS, OH
9075 CENTRE POINTE DRIVE, WESTCHESTER, OH
710 MAIN ST., ZANESVILLE, OH
200 WEST FOURTH STREET, COVINGTON, KY
333 SCOTT STREET, COVINGTON, KY
COLUMBUS FOB: 200 N HIGH ST, COLUMBUS, OH
401 NORTH FRONT STREET, COLUMBUS, OH

NPA (Subcontractor): Greene, Inc., Xenia, OH

SANTA ANA POD: 801 CIVIC CENTER DRIVE, W., SANTA ANA, CA

NPA (Subcontractor): Landmark Services, Inc., Santa Ana, CA

Patricia Briscoe,

Deputy Director, Business Operations.

[FR Doc. E9–29485 Filed 12–10–09; 8:45 am]

BILLING CODE 6353–01–P

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Intent To Prepare a Draft Environmental Impact Statement for the Proposed Mather Specific Plan, Sacramento County, CA, Permit Application number SPK–2002–561

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DOD.

ACTION: Notice of intent.

SUMMARY: The U.S. Army Corps of Engineers, Sacramento District, (Corps) will prepare an Environmental Impact Statement (EIS) for the Mather Specific Plan in Sacramento County, CA. The Sacramento County Department of Economic Development has applied for a Department of the Army permit to fill approximately 35.4 acres of waters of the United States, including wetlands, to construct the project.

ADDRESSES: Please send written comments to Kathleen Dadey, U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Room 1480, Sacramento, CA, 95814–2922.

FOR FURTHER INFORMATION CONTACT: Questions about the proposed action and EIS can be answered by Kathleen Dadey, (916) 557–7253, e-mail: *kathleen.a.dadey@usace.army.mil.*

SUPPLEMENTARY INFORMATION: The Sacramento County Department of Economic Development has applied for Department of Army permits under Section 404 of the Clean Water Act to develop public and private uses within the Mather Specific Plan area in eastern Sacramento County, CA. The Plan area encompasses approximately 5,716 acres of land, of which over 2,000 acres are

currently developed. The project proposes to develop approximately 1,870 acres, and set aside 1,274 acres of wetland preserve/open space. The proposed action includes approximately 584 acres of commercial uses associated with the adjacent Mather Airport, 201 acres of commercial, 84 acres of aggregate extraction, 598 acres of university village/residential, 102 acres of parks and recreation, 274 acres for a regional sports park, and 27.4 acres for utilities and infrastructure. Approximately 124 acres of waters of the United States have been identified in the proposed project area, including 69.8 acres of vernal wetlands (pools and swales), 27.3 acres of depressional seasonal wetlands, 1.9 acres of ditches, 5.7 acres of lake/pond and 19.1 acres of other waters of the United States. The applicant has applied for permits to fill 35.39 acres of these waters. The approximately 1,274 acre open space and wetland preserve would contain approximately 47.3 acres of waters not directly impacted by the project. In addition, approximately 4.9 acres of wetlands at the west end of the Mather Airport runway would be avoided and placed under some type of protective agreement, but not a conservation easement.

The EIS will include an evaluation of a reasonable range of alternatives. Currently, at least four alternatives are expected to be analyzed in detail: (1) The no action alternative (no permit issued), (2) the applicant's preferred project (proposed action), (3) an offsite alternative, and (4) a reduced development footprint alternative. The no action alternative assumes limited development would occur in the Mather Specific Plan area with all waters of the United States avoided. The off-site alternative assumes the proposed project would be developed at a different but suitably-sized site in the region. A reduced development footprint alternative will have a smaller development footprint than the applicant's preferred project with less direct impacts to waters of the United States.

The Corps' scoping process for the EIS includes a public involvement program with several opportunities to provide oral and written comments. In addition to public meetings and notifications in the **Federal Register**, the Corps will issue public notices when the draft and final EISs are available. Affected Federal, State, and local agencies, Native American tribes, and other interested organizations and parties are invited to participate.

Potentially significant issues to be analyzed in the EIS include, but are not limited to: Hydrology, water supply, water quality, cultural resources, biological resources, traffic and transportation, and air quality.

The Corps is the lead agency for preparation of the EIS under the requirements of the National Environmental Policy Act (NEPA). The Corps will coordinate with the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service and Central Valley Regional Water Quality Control Board.

Other environmental review and consultation requirements for the proposed action include the need for the applicant to obtain water quality certification under Section 401 of the Clean Water Act from the Central Valley Regional Water Quality Control Board. In addition, because the proposed project may affect federally-listed endangered species, the Corps will formally consult with the U.S. Fish and Wildlife Service in accordance with Section 7 of the federal Endangered Species Act. The Corps will also be consulting with the State Historic Preservation Officer under Section 106 of the National Historic Preservation Act concerning properties listed, or potentially eligible for listing, on the National Register of Historic Places.

One public scoping meeting for the EIS will be held on January 6, from 4 p.m. to 7 p.m. Conference Room 170 located at 10545 Armstrong Avenue, Mather CA, 95655. Interested parties can provide oral and written comments at the meeting. Interested parties may also submit written comments on this notice. Scoping comments should be submitted before January 31, 2010, but may be submitted at any time prior to publication of the Draft EIS.

Interested parties may register for the Corps' public notice email notification lists at: *http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/pnlist.html.*

Dated: November 30, 2009.

Thomas C. Chapman,

Colonel, Corps of Engineers, District Engineer.

[FR Doc. E9–29603 Filed 12–10–09; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Public Hearings for the Draft Environmental Impact Statement/ Overseas Environmental Impact Statement for the Gulf of Alaska Navy Training Activities

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: Pursuant to section 102(2)(c) of the National Environmental Policy Act (NEPA); the Council on Environmental Quality Regulations for implementing the procedural provisions of NEPA (Title 40 Code of Federal Regulations Parts 1500–1508); and Executive Order 12114, Environmental Effects Abroad of Major Federal Actions, the Department of the Navy (Navy) has prepared and filed with the U.S. Environmental Protection Agency a Draft Environmental Impact Statement/ Overseas Environmental Impact Statement (EIS/OEIS) for public release on December 11, 2009. The National Marine Fisheries Service (NMFS) is a Cooperating Agency for the EIS/OEIS.

The Draft EIS/OEIS evaluates the potential environmental effects of the Proposed Action from Navy training activities conducted in the Gulf of Alaska and Alaska's inland training areas, collectively referred to as the Alaska Training Areas (ATA). The Draft EIS/OEIS addresses ongoing and proposed military training activities, as well as proposed force structure changes and the introduction of new weapons and systems to the Fleet. The Proposed Action serves to achieve and maintain Fleet readiness using the ATA to support and conduct current, emerging, and future training activities. A Notice of Intent for this Draft EIS/OEIS was published in the **Federal Register** on March 17, 2008 (73 FR 14237).

The Navy will conduct five public hearings to receive oral and written comments on the Draft EIS/OEIS. Federal, State, and local agencies, elected officials, and other interested individuals and organizations are invited to be present or represented at the public hearings. This notice announces the dates and locations of the public hearings for this Draft EIS/OEIS.

An open house session will precede the scheduled public hearing at each of the locations listed below, and will allow individuals to review the information presented in the Draft EIS/ OEIS. Navy representatives will be available during the open house sessions to clarify information related to the Draft EIS/OEIS.

Dates and Addresses: Five public hearings will be held in Alaska to receive oral and written comments on the Draft EIS/OEIS. All meetings will start with an open house session from 5 p.m. to 7 p.m., followed by a presentation and formal public comment period from 7 p.m. to 8:30 p.m. Public hearings will be held on the following dates and at the following locations:

1. Thursday, January 7, 2010, at Kodiak High School Cafeteria, 722 Mill Bay Road, Kodiak, Alaska;

2. Friday, January 8, 2010, at Fairview Recreation Center Main Gymnasium, 1121 E. 10th Avenue, Anchorage, Alaska;

3. Saturday, January 9, 2010, at West Homer Elementary School Gymnasium, 995 Soundview Avenue, Homer, Alaska;

4. Monday, January 11, 2010, at Juneau Arts and Culture Center Main Hall, 350 Whittier Street, Juneau, Alaska;

5. Tuesday, February 12, 2010, at Orca Adventure Lodge Meeting Room & Café, 2500 Orca Road, Cordova, Alaska.

FOR FURTHER INFORMATION CONTACT: Naval Facilities Engineering Command Northwest, Attention: Mrs. Amy Burt, Gulf of Alaska Navy Training Activities EIS/OEIS Project Manager, 1101 Tautog Circle, Suite 203, Silverdale, WA 98315–1101; or *http://www.GulfofAlaskaNavyEIS.com.*

SUPPLEMENTARY INFORMATION: Air and sea training activities are conducted within the Gulf of Alaska Temporary Maritime Activities Area (TMAA) which is part of the ATA. The land, air, and sea components of the ATA provide the space and resources needed to realistically train Navy Sailors to achieve and maintain Fleet readiness. Navy air and sea training activities originate from Navy ships located within the TMAA. The TMAA is situated south of Prince William Sound and east of Kodiak Island and includes 42,146 square nautical miles of airspace, sea space, and undersea space. The Navy also conducts activities in established U.S. Air Force and U.S. Army inland training areas, which include more than 65,000 square miles of airspace and land area. The ATA serve as the principal training venue for annual joint training exercises, which can involve forces from the U.S. Navy, Air Force, Army, Coast Guard, and local, state, and nongovernmental agencies. The ATA are used for training activities including operating aircraft, ships, and submarines; conducting training against moving ships and aircraft; practicing aerial surveillance; and detecting and locating submarines.

The purpose of the Navy's Proposed Action is to: Achieve and maintain Fleet readiness using the ATA to support and conduct current, emerging, and future training activities.

The need for the Proposed Action is to: (1) Maintain current levels of military readiness by training in the ATA; (2) accommodate future increases in levels of training activities in the ATA; (3) adequately support the training need for new aircraft, ships, submarines, and weapons systems; (4) identify shortfalls in training, particularly training instrumentation, and address through enhancements; (5) maintain the long-term viability of the ATA as a Navy training area while protecting human health and the environment, and enhancing the quality, capabilities, and safety of the training area; and (6) be able to bring U.S. Army, Navy, Air Force, and Coast Guard assets together into one geographic area for joint training.

Under the No Action Alternative, training activities within the ATA would continue at current levels over a maximum time frame of 14 days. This alternative includes one annual Carrier Strike Group training exercise and excludes the use of mid-frequency active sonar. Alternative 1 proposes an increase in the number of training activities from current levels as necessary to support Fleet exercise requirements over a maximum time frame of 21 days in the summer months (April—October), to include the use of active sonar; and accommodates training enhancement instrumentation, including the use of a Portable Undersea Tracking Range, and force structure changes associated with the introduction of new weapon systems, vessels, and aircraft into the Fleet. Alternative 2, the Preferred Alternative, consists of all elements of Alternative 1. In addition, Alternative 2 includes an increase in the number of training activities over Alternative 1 levels by conducting a second annual Carrier Strike Group training exercise, which could also last up to 21 days in the summer months, and conducting a Sinking Exercise during each summertime exercise (a maximum of two).

The Draft EIS/OEIS addresses potential environmental impacts on multiple resources, including but not limited to: Air quality; water resources; biological resources; cultural resources; socioeconomics; and public health and safety.

No significant impacts are identified for most resources within the ATA that cannot be mitigated. The results of the analysis indicate, however, that while there is the possibility for physiological effects and altered behavior from sound in the water from active sonar and explosives, no mortality to marine mammals is anticipated. Furthermore, the estimation of sound exposures does not consider the Navy's use of protective measures, which would reduce the likelihood of exposures at the highest sound levels. The Navy has requested from NMFS a Letter of Authorization (LOA) in accordance with the Marine Mammal Protection Act to authorize the incidental take of marine mammals that may result from the implementation of the activities analyzed in the Gulf of Alaska Navy Training Activities Draft EIS/OEIS.

In accordance with Section 7 of the Endangered Species Act, the Navy is consulting with NMFS and U.S. Fish and Wildlife Service (USFWS) for potential impacts to federally listed species. Navy analysis has indicated that under the Clean Air Act requirements, while emissions over current levels may occur, these emissions would not exceed air quality standards, and under the Clean Water Act there would be no significant impacts to water quality. Analysis under the National Historic Preservation Act, in addition to other applicable laws and regulations, indicates that no significant impacts to cultural resources would occur if the Proposed Action or alternatives were implemented. Implementation of the Proposed Action or alternatives would not result in a significant adverse effect on the population of a migratory bird and fish species.

The decision to be made by the Navy is to determine which of the alternatives analyzed in the EIS/OEIS best meet the operational needs of the Navy given that all reasonably foreseeable environmental impacts have been considered.

The Draft EIS/OEIS was distributed to Federal, State, and local agencies, elected officials, and other interested individuals and organizations. The public comment period will end on January 25, 2010. Copies of the Draft EIS/OEIS are available for public review at the following libraries: Z.J. Loussac Library, Government Documents, 3600 Denali Street, Anchorage, AK; Alaska State Library, Government Documents, 333 Willoughby Avenue, 8th Floor, Juneau, AK; A. Holmes Johnson Memorial Library, 319 Lower Mill Bay Road, Kodiak, AK; University of Alaska Fairbanks, Rasmussen Library, Government Documents, 310 Tanana Loop, Fairbanks, AK; Cordova Public Library, 622 First Street, Cordova, AK; Copper Valley Community Library, Mile 186 Glenn Highway, Glennallen, AK; Seward Community Library, 238 5th Avenue, Seward, AK; Homer Public Library, 500 Hazel Avenue, Homer, AK.

The Gulf of Alaska Navy Training Activities Draft EIS/OEIS is also available for electronic public viewing at: *http://www.GulfofAlaskaNavyEIS.com.* A paper copy of the Executive Summary or a single CD with the Draft EIS/OEIS

will be made available upon written request by contacting Naval Facilities Engineering Command Northwest, Attention: Mrs. Amy Burt, Gulf of Alaska Navy Training Activities EIS/OEIS Project Manager, 1101 Tautog Circle, Suite 203, Silverdale, WA 98315–1101.

Federal, State, and local agencies, elected officials, and interested individuals and organizations are invited to be present or represented at the public hearing. Written comments can also be submitted during the open house sessions preceding the public hearings.

Oral statements will be heard and transcribed by a stenographer; however, to ensure the accuracy of the record, all statements should be submitted in writing. All statements, both oral and written, will become part of the public record on the Draft EIS/OEIS and will be responded to in the Final EIS/OEIS. Equal weight will be given to both oral and written statements. In the interest of available time, and to ensure all who wish to give an oral statement have the opportunity to do so, each speaker's comments will be limited to three (3) minutes. If you have prepared a written statement, you may read it out loud if you can do so within the three minute time limit, or you may turn it in at the public hearing or mail the statement to Naval Facilities Engineering Command Northwest, Attention: Mrs. Amy Burt, Gulf of Alaska Navy Training Activities EIS/OEIS Project Manager, 1101 Tautog Circle, Suite 203, Silverdale, WA 98315–1101. In addition, comments may be submitted online at *http://www.GulfofAlaskNavyEIS.com* during the comment period. All written comments must be postmarked by January 25, 2010, to ensure they become part of the official record. All comments will be addressed in the Final EIS/OEIS.

Dated: December 7, 2009.

A.M. Vallandingham,

Lieutenant Commander, Office of the Judge Advocate General, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. E9–29565 Filed 12–10–09; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF DEFENSE

Defense Acquisition Regulations System

Waiver of 10 U.S.C. 2534 for Certain Defense Items Produced in the United Kingdom

AGENCY: Defense Acquisition Regulations System, Department of Defense (DoD).

ACTION: Notice of waiver of 10 U.S.C. 2534 for certain defense items produced in the United Kingdom.

SUMMARY: The Under Secretary of Defense (Acquisition, Technology, and Logistics) is waiving the limitation of 10 U.S.C. 2534 for certain defense items produced in the United Kingdom (UK). 10 U.S.C. 2534 limits DoD procurement of certain items to sources in the national technology and industrial base. The waiver will permit procurement of enumerated items from sources in the UK, unless otherwise restricted by statute.

DATES: *Effective Date:* This waiver is effective for one year, beginning December 28, 2009.

FOR FURTHER INFORMATION CONTACT: Ms. Patricia Foley, OUSD(AT&L), Office of the Director of Defense Procurement and Acquisition Policy, Contract Policy and International Contracting, Room 5E621, 3060 Defense Pentagon, Washington, DC 20301–3060, telephone (703) 693–1145.

SUPPLEMENTARY INFORMATION:

Subsection (a) of 10 U.S.C. 2534 provides that the Secretary of Defense may procure the items listed in that subsection only if the manufacturer of the item is part of the national technology and industrial base. Subsection (i) of 10 U.S.C. 2534 authorizes the Secretary of Defense to exercise the waiver authority in subsection (d), on the basis of the applicability of paragraph (2) or (3) of that subsection, only if the waiver is made for a particular item listed in subsection (a) and for a particular foreign country. Subsection (d) authorizes a waiver if the Secretary determines that application of the limitation ''would impede the reciprocal procurement of defense items under a memorandum of understanding providing for reciprocal procurement of defense items'' and if he determines that ''that country does not discriminate against defense items produced in the United States to a greater degree than the United States discriminates against defense items produced in that country.'' The Secretary of Defense has delegated the waiver authority of 10 U.S.C. 2534(d) to the Under Secretary of Defense (Acquisition, Technology, and Logistics).

DoD has had a Reciprocal Defense Procurement Memorandum of Understanding (MOU) with the UK since 1975, most recently renewed on December 16, 2004.

The Under Secretary of Defense (Acquisition, Technology, and Logistics) finds that the UK does not discriminate against defense items produced in the United States to a greater degree than the United States discriminates against defense items produced in the UK, and also finds that application of the limitation in 10 U.S.C. 2534 against defense items produced in the UK would impede the reciprocal procurement of defense items under the MOU.

Under the authority of 10 U.S.C. 2534, the Under Secretary of Defense (Acquisition, Technology, and Logistics) has determined that application of the limitation of 10 U.S.C. 2534(a) to the procurement of any defense item produced in the UK that is listed below would impede the reciprocal procurement of defense items under the MOU with the UK.

On the basis of the foregoing, the Under Secretary of Defense (Acquisition, Technology, and Logistics) is waiving the limitation in 10 U.S.C. 2534(a) for procurements of any defense item listed below that is produced in the UK. This waiver applies only to the limitations in 10 U.S.C. 2534(a). It does not apply to any other limitation, including section 8018 of the DoD Appropriations Act for Fiscal Year 2009 (Pub. L. 110–329). This waiver applies to procurements under solicitations issued during the period from December 28, 2009, to December 27, 2010 Similar waivers have been granted since 1998, most recently in 2008 (73 FR 73257, December 2, 2008).

List of Items to Which This Waiver Applies

1. Air circuit breakers.
2. Welded shipboard anchor and mooring chain with a diameter of four inches or less.
3. Gyrocompasses.
4. Electronic navigation chart systems.
5. Steering controls.
6. Pumps.
7. Propulsion and machinery control systems.
8. Totally enclosed lifeboats.

Amy G. Williams,

Editor, Defense Acquisition Regulations System.

[FR Doc. E9–29568 Filed 12–10–09; 8:45 am]

BILLING CODE 5001–08–P

DEPARTMENT OF EDUCATION

Fund for the Improvement of Postsecondary Education—European Union-United States Atlantis Program; Program for North American Mobility in Higher Education; United States-Brazil Higher Education Consortia Program; United States-Russia Program: Improving Research and Educational Activities in Higher Education

Catalog of Federal Domestic Assistance Numbers (CFDA) Numbers: 84.116J (European Union (EU)-United States (U.S.) Atlantis Program), 84.116N (Program for North American Mobility in Higher Education), 84.116M (U.S.-Brazil Higher Education Consortia Program), 84.116S (U.S.-Russia Program: Improving Research and Educational Activities in Higher Education).

AGENCY: Office of Postsecondary Education, Department of Education.

ACTION: Notice of final priorities.

SUMMARY: The Assistant Secretary for Postsecondary Education announces one absolute priority for each of the four special focus competitions conducted by the Fund for the Improvement of Postsecondary Education (FIPSE): The EU–U.S. Atlantis Program, the Program for North American Mobility in Higher Education, the U.S.-Brazil Higher Education Consortia Program, and the U.S.-Russia Program: Improving Research and Educational Activities in Higher Education competitions.

The Assistant Secretary may use these priorities for competitions in fiscal year (FY) 2010 and in later years. We take this action to focus Federal financial assistance on an identified need in the area of postsecondary education. We intend these absolute priorities to improve postsecondary education opportunities by supporting the formation of international educational consortia and encouraging cooperation in the coordination of curricula, the exchange of students, and the opening of educational opportunities between the U.S. and the countries involved in these programs.

DATES: *Effective Date:* These priorities are effective January 11, 2010.

FOR FURTHER INFORMATION CONTACT: Sarah Beaton, U.S. Department of Education, 1990 K Street, NW., room 6154, Washington, DC 20006–8544. Telephone: (202) 502–7621 or by e-mail: *Sarah.Beaton@ed.gov.*

If you use a telecommunications device for the deaf (TDD), call the Federal Relay Service, toll free, at 1–800–877–8339.

SUPPLEMENTARY INFORMATION:

Purpose of Program: The purpose of the Fund for the Improvement of Postsecondary Education (FIPSE) program is to support reforms, innovations, and significant improvements of postsecondary education that respond to problems of national significance and serve as international models. Under the FIPSE program, the Secretary makes grants for special projects concerning areas of national need.

Program Authority: 20 U.S.C. 1138–1138d.

We published a notice of proposed priorities for the FIPSE program in the **Federal Register** on September 8, 2009 (74 FR 46117). That notice contained background information and our reasons for proposing the particular priorities.

Except for minor editorial revisions, there are no differences between the proposed priorities and these final priorities.

Public Comment: In response to our invitation in the notice of proposed priorities, we did not receive any substantive comments on the proposed priorities.

Final Priorities:

Absolute Priority 1—EU–U.S. Atlantis Program (84.116J).

This priority supports the formation of educational consortia between the EU and U.S. institutions. To meet this priority, the applicant must propose a project that encourages cooperation in the coordination of curricula; the exchange of students, if pertinent to grant activities; and the opening of educational opportunities between the U.S. and countries in the EU. In order to be eligible for an award under this priority, the applicant in the U.S. must be a U.S. institution and the applicant in the EU must be an EU institution.

EU institutions participating in any consortium proposal under this priority may apply to the Directorate-General for Education and Culture (DG EAC), European Commission for funding under a separate but parallel EU competition.

Absolute Priority 2—Program for North American Mobility in Higher Education (84.116N).

This priority supports the formation of educational consortia of U.S., Canadian, and Mexican institutions. To meet this priority, the applicant must propose a project that supports cooperation in the coordination of curricula; the exchange of students, if pertinent to grant activities; and the opening of educational opportunities among the U.S., Canada, and Mexico. In order to be eligible for an award under this priority, the applicant in the U.S. must be a U.S. institution, the applicant in Mexico must be a Mexican institution, and the applicant in Canada must be a Canadian institution. Canadian and Mexican institutions participating in any consortium proposal under this priority may apply, respectively, to Human Resources and Social Development Canada (HRSDC) or the Mexican Secretariat for Public Education (SEP), for additional funding under separate but parallel Canadian and Mexican competitions.

Absolute Priority 3—U.S.-Brazil Higher Education Consortia Program (84.116M).

This priority supports the formation of educational consortia of U.S. and Brazilian institutions. To meet this priority, the applicant must propose a project that supports cooperation in the coordination of curricula; the exchange of students, if pertinent to grant activities; and the opening of educational opportunities between the U.S. and Brazil. In order to be eligible for an award under this priority, the applicant in the U.S. must be a U.S. institution and the applicant in Brazil must be a Brazilian institution. Brazilian institutions participating in any consortium proposal under this priority may apply to the Coordination of Improvement of Personnel of Superior Level (CAPES), Brazilian Ministry of Education, for additional funding under a separate but parallel Brazilian competition.

Absolute Priority 4—U.S.-Russian Program: Improving Research and Educational Activities in Higher Education (84.116S).

This priority supports the formation of educational consortia of U.S. and Russian institutions to encourage mutual socio-cultural-linguistic cooperation; the coordination of joint development of curricular, educational materials; and the exchange of students. In order to be eligible for an award under this priority, the applicant in the U.S. must be a U.S. institution and the applicant in Russia must be a Russian institution. Russian institutions will receive separate but parallel funding from the Russian Ministry of Education and Science.

Types of Priorities:

When inviting applications for a competition using one or more priorities, we designate the type of each priority as absolute, competitive preference, or invitational through a notice in the **Federal Register.** The effect of each type of priority follows:

Absolute priority: Under an absolute priority, we consider only applications that meet the priority (34 CFR 75.105(c)(3)).

Competitive preference priority: Under a competitive preference priority, we give competitive preference to an application by: (1) Awarding additional points, depending on the extent to which the application meets the priority (34 CFR 75.105(c)(2)(i)); or (2) selecting an application that meets the priority over an application of comparable merit that does not meet the priority (34 CFR 75.105(c)(2)(ii)).

Invitational priority: Under an invitational priority, we are particularly interested in applications that meet the priority. However, we do not give an application that meets the priority a preference over other applications (34 CFR 75.105(c)(1)).

This notice does not preclude us from proposing additional priorities, requirements, definitions, or selection criteria, subject to meeting applicable rulemaking requirements.

Note: This notice does *not* solicit applications. In any year in which we choose to use one or more of these priorities, we invite applications through a notice in the **Federal Register.**

Executive Order 12866: This notice has been reviewed in accordance with Executive Order 12866. Under the terms of the order, we have assessed the potential costs and benefits of this final regulatory action.

The potential costs associated with this final regulatory action are those resulting from statutory requirements and those we have determined as necessary for administering this program effectively and efficiently.

In assessing the potential costs and benefits—both quantitative and qualitative—of this final regulatory action, we have determined that the benefits of the proposed priorities justify the costs.

We have determined, also, that this final regulatory action does not unduly interfere with State, local, and tribal governments in the exercise of their governmental functions.

We summarized the costs and benefits of this regulatory action in the notice of proposed priorities.

Intergovernmental Review: The FIPSE program is subject to Executive Order 12372 and the regulations in 34 CFR part 79. One of the objectives of the Executive order is to foster an intergovernmental partnership and a strengthened federalism. The Executive order relies on processes developed by State and local governments for coordination and review of proposed Federal financial assistance.

This document provides early notification of our specific plans and actions for this program.

Accessible Format: Individuals with disabilities can obtain this document in an accessible format (e.g., braille, large print, audiotape, or computer diskette) on request to the program contact person listed under **FOR FURTHER INFORMATION CONTACT**.

Electronic Access to This Document: You can view this document, as well as all other documents of this Department published in the **Federal Register,** in text or Adobe Portable Document Format (PDF) on the Internet at the following site: *http://www.ed.gov/news/fedregister.* To use PDF you must have Adobe Acrobat Reader, which is available free at this site.

Note: The official version of this document is the document published in the **Federal Register.** Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available on GPO Access at: *http://www.gpoaccess.gov/nara/index.html.*

Delegation of Authority: The Secretary of Education has delegated authority to Daniel T. Madzelan, Director, Forecasting and Policy Analysis for the Office of Postsecondary Education, to perform the functions and duties of the Assistant Secretary for Postsecondary Education.

Dated: December 8, 2009.

Daniel T. Madzelan,

Director, Forecasting and Policy Analysis.

[FR Doc. E9–29584 Filed 12–10–09; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Office of Special Education and Rehabilitative Services Overview Information; National Institute on Disability and Rehabilitation Research (NIDRR)—Disability and Rehabilitation Research Projects and Centers Program—Advanced Rehabilitation Research Training (ARRT) Projects; Notice Inviting Applications for New Awards for Fiscal Year (FY) 2010

Catalog of Federal Domestic Assistance (CFDA) Number: 84.133P–1

Dates:

Applications Available: December 11, 2009.

Deadline for Transmittal of Applications: February 9, 2010.

Full Text of Announcement

I. Funding Opportunity Description

Purpose of Program: The purpose of this program is to provide research training and experience at an advanced level to individuals with doctorates, or similar advanced degrees, who have clinical or other relevant experience. ARRT projects train rehabilitation researchers, including researchers with disabilities, with particular attention to research areas that support the implementation and objectives of the Rehabilitation Act of 1973, as amended (Act), and that improve the effectiveness of services authorized under the Act.

Priority: In accordance with 34 CFR 75.105(b)(2)(ii), this priority is from the regulations for this program (34 CFR 350.12 and 350.64 through 350.65).

Absolute Priority: For FY 2010 this priority is an absolute priority. Under 34 CFR 75.105(c)(3), we consider only applications that meet this priority.

This priority is:

Advanced Rehabilitation Research Training Projects

ARRT projects must (1) Recruit and select candidates for advanced research training; (2) provide a training program that includes didactic and classroom instruction, is multidisciplinary, emphasizes scientific research methodology, and may involve collaboration among institutions; (3) provide research experience, laboratory experience, or its equivalent, in a community-based research setting, and a practicum experience that involves each trainee in clinical research and in activities with organizations representing individuals with disabilities; (4) provide academic mentorship or guidance, and opportunities for scientific collaboration with qualified researchers at the host university and other appropriate institutions; and (5) provide opportunities for participation in the development of professional presentations and publications, and for attendance at professional conferences and meetings, as appropriate for the individual's field of study and level of experience.

It is expected that applicants will articulate goals, objectives, and expected outcomes for the research training activities. Applicants should describe expected public benefits of these training activities, especially benefits for individuals with disabilities, and propose projects that are optimally designed to demonstrate outcomes that are consistent with the proposed goals. Applicants are encouraged to include information describing how they will measure outcomes, including the indicators for determining that results have occurred. Submission of this measurement information is voluntary, except where required by the selection criteria listed in the application package.

A grantee for an ARRT project must provide training to individuals for at

least one academic year, unless a longer training period is necessary to ensure that each trainee is qualified to conduct independent research upon completion of the course of training.

Trainees under an ARRT project must devote at least 80 percent of their time to the activities of the training program during the training period.

Note: This program is in concert with NIDRR's Long-Range Plan for FY 2005–2009 (Plan). The Plan, which was published in the **Federal Register** on February 15, 2006 (71 FR 8165), can be accessed on the Internet at the following site: *www.ed.gov/about/offices/list/osers/nidrr/policy.html.*

Through the implementation of the Plan, NIDRR seeks to (1) Improve the quality and utility of disability and rehabilitation research; (2) foster an exchange of expertise, information, and training to facilitate the advancement of knowledge and understanding of the unique needs of individuals with disabilities from traditionally underserved populations; (3) determine the best strategies and programs to improve rehabilitation outcomes for individuals with disabilities from underserved populations; (4) identify research gaps; (5) identify mechanisms of integrating research and practice; and (6) disseminate findings.

Program Authority: 29 U.S.C. 762(k).

Applicable Regulations: (a) The Education Department General Administrative Regulations (EDGAR) in 34 CFR parts 74, 75, 77, 80, 81, 82, 84, 85, 86, and 97. (b) The regulations for this program in 34 CFR part 350.

II. Award Information

Type of Award: Discretionary grants.

Estimated Available Funds: The Administration has requested $110,741,000 for NIDRR for FY 2010, of which we intend to use an estimated $600,000 for the ARRT competition. The actual level of funding, if any, depends on final congressional action. However, we are inviting applications to allow enough time to complete the grant process if Congress appropriates funds for this program.

Estimated Range of Awards: $147,000 to $150,000.

Estimated Average Size of Awards: $150,000.

Maximum Award: We will reject any application that proposes a budget exceeding $150,000 for a single budget period of 12 months. The Assistant Secretary for Special Education and Rehabilitative Services may change the maximum amount through a notice published in the **Federal Register.**

Note: Indirect cost reimbursement on a training grant is limited to eight percent of a modified total direct cost base, defined as total direct costs less stipends, tuition and related fees, and capital expenditures of $5,000 or more.

Estimated Number of Awards: 4.

Note: The Department is not bound by any estimates in this notice.

Maximum Project Period: We will reject any application that proposes a project period exceeding 60 months. The Assistant Secretary for Special Education and Rehabilitative Services may change the maximum project period through a notice published in the **Federal Register.**

III. Eligibility Information

1. *Eligible Applicants:* Institutions of higher education.

2. *Cost Sharing or Matching:* This competition does not require cost sharing or matching.

IV. Application and Submission Information

1. *Address to Request Application Package:* You can obtain an application package via the Internet or from the Education Publications Center (ED Pubs). To obtain a copy via the Internet, use the following address: *http://www.ed.gov/fund/grant/apply/grantapps/index.html.*

To obtain a copy from ED Pubs, write, fax, or call the following: Education Publications Center, P.O. Box 1398, Jessup, MD 20794–1398. Telephone, toll free: 1–877–433–7827. *FAX:* (301) 470–1244. If you use a telecommunications device for the deaf (TDD), call, toll free: 1–877–576–7734.

You can contact ED Pubs at its Web site, also: *http://www.ed.gov/pubs/edpubs.html* or at its e-mail address: *edpubs@inet.ed.gov.*

If you request an application from ED Pubs, be sure to identify this competition as follows: CFDA number 84.133P–1.

Individuals with disabilities can obtain a copy of the application package in an alternative format (e.g., braille, large print, audiotape, or computer diskette) by contacting the program contact person listed under *Alternative Format* in section VIII of this notice.

2. *Content and Form of Application Submission:* Requirements concerning the content of an application, together with the forms you must submit, are in the application package for this competition.

Page Limit: The application narrative (Part III of the application) is where you, the applicant, address the selection criteria that reviewers use to evaluate your application. We recommend that you limit Part III to the equivalent of no more than 75 pages, using the following standards:

- A ''page'' is 8.5″ x 11″, on one side only, with 1″ margins at the top, bottom, and both sides.
- Double space (no more than three lines per vertical inch) all text in the application narrative. You may single space titles, headings, footnotes, quotations, references, and captions, as well as all text in charts, tables, figures, and graphs.
- Use a font that is either 12 point or larger or no smaller than 10 pitch (characters per inch).
- Use one of the following fonts: Times New Roman, Courier, Courier New, or Arial. An application submitted in any other font (including Times Roman or Arial Narrow) will not be accepted.

The page limit does not apply to Part I, the cover sheet; Part II, the budget section, including the narrative budget justification; Part IV, the assurances and certifications; or the one-page abstract, the resumes, the bibliography, or the letters of support. However, the page limit does apply to all of the application narrative section (Part III).

We will reject your application if you exceed the page limit.

3. *Submission Dates and Times:*

Applications Available: December 11, 2009.

Deadline for Transmittal of Applications: February 9, 2010.

Applications for grants under this competition must be submitted electronically using the Electronic Grant Application System (e-Application) accessible through the Department's e-Grants site. For information (including dates and times) about how to submit your application electronically, or in paper format by mail or hand delivery if you qualify for an exception to the electronic submission requirement, please refer to section IV.6. *Other Submission Requirements* in this notice.

We do not consider an application that does not comply with the deadline requirements.

Individuals with disabilities who need an accommodation or auxiliary aid in connection with the application process should contact the person listed under **FOR FURTHER INFORMATION CONTACT** in section VII in this notice. If the Department provides an accommodation or auxiliary aid to an individual with a disability in connection with the application process, the individual's application remains subject to all other requirements and limitations in this notice.

4. *Intergovernmental Review:* This program is not subject to Executive

Order 12372 and the regulations in 34 CFR part 79.

5. *Funding Restrictions:* We reference regulations outlining funding restrictions in the *Applicable Regulations* section of this notice.

6. *Other Submission Requirements:* Applications for grants under this competition must be submitted electronically unless you qualify for an exception to this requirement in accordance with the instructions in this section.

a. *Electronic Submission of Applications.*

Applications for grants under the ARRT Program—CFDA Number 84.133P must be submitted electronically using e-Application, accessible through the Department's e-Grants Web site at: *http://e-grants.ed.gov.*

We will reject your application if you submit it in paper format unless, as described elsewhere in this section, you qualify for one of the exceptions to the electronic submission requirement *and* submit, no later than two weeks before the application deadline date, a written statement to the Department that you qualify for one of these exceptions. Further information regarding calculation of the date that is two weeks before the application deadline date is provided later in this section under *Exception to Electronic Submission Requirement.*

While completing your electronic application, you will be entering data online that will be saved into a database. You may not e-mail an electronic copy of a grant application to us.

Please note the following:

• You must complete the electronic submission of your grant application by 4:30:00 p.m., Washington, DC time, on the application deadline date. E-Application will not accept an application for this competition after 4:30:00 p.m., Washington, DC time, on the application deadline date. Therefore, we strongly recommend that you do not wait until the application deadline date to begin the application process.

• The hours of operation of the e-Grants Web site are 6:00 a.m. Monday until 7:00 p.m. Wednesday; and 6:00 a.m. Thursday until 8:00 p.m. Sunday, Washington, DC time. Please note that, because of maintenance, the system is unavailable between 8:00 p.m. on Sundays and 6:00 a.m. on Mondays, and between 7:00 p.m. on Wednesdays and 6:00 a.m. on Thursdays, Washington, DC time. Any modifications to these hours are posted on the e-Grants Web site.

• You will not receive additional point value because you submit your application in electronic format, nor will we penalize you if you qualify for an exception to the electronic submission requirement, as described elsewhere in this section, and submit your application in paper format.

• You must submit all documents electronically, including all information you typically provide on the following forms: the Application for Federal Assistance (SF 424), the Department of Education Supplemental Information for SF 424, Budget Information—Non-Construction Programs (ED 524), and all necessary assurances and certifications. You must attach any narrative sections of your application as files in a .DOC (document), .RTF (rich text), or .PDF (Portable Document) format. If you upload a file type other than the three file types specified in this paragraph or submit a password protected file, we will not review that material.

• Your electronic application must comply with any page limit requirements described in this notice.

• Prior to submitting your electronic application, you may wish to print a copy of it for your records.

• After you electronically submit your application, you will receive an automatic acknowledgment that will include a PR/Award number (an identifying number unique to your application).

• Within three working days after submitting your electronic application, fax a signed copy of the SF 424 to the Application Control Center after following these steps:

(1) Print SF 424 from e-Application.

(2) The applicant's Authorizing Representative must sign this form.

(3) Place the PR/Award number in the upper right hand corner of the hard-copy signature page of the SF 424.

(4) Fax the signed SF 424 to the Application Control Center at (202) 245–6272.

• We may request that you provide us original signatures on other forms at a later date.

Application Deadline Date Extension in Case of e-Application Unavailability: If you are prevented from electronically submitting your application on the application deadline date because e-Application is unavailable, we will grant you an extension of one business day to enable you to transmit your application electronically, by mail, or by hand delivery. We will grant this extension if—

(1) You are a registered user of e-Application and you have initiated an electronic application for this competition; and

(2) (a) E-Application is unavailable for 60 minutes or more between the hours of 8:30 a.m. and 3:30 p.m., Washington, DC time, on the application deadline date; or

(b) E-Application is unavailable for any period of time between 3:30 p.m. and 4:30:00 p.m., Washington, DC time, on the application deadline date.

We must acknowledge and confirm these periods of unavailability before granting you an extension. To request this extension or to confirm our acknowledgment of any system unavailability, you may contact either (1) the person listed elsewhere in this notice under **FOR FURTHER INFORMATION CONTACT** (*see* VII. Agency Contact) or (2) the e-Grants help desk at 1–888–336–8930. If e-Application is unavailable due to technical problems with the system and, therefore, the application deadline is extended, an e-mail will be sent to all registered users who have initiated an e-Application. Extensions referred to in this section apply only to the unavailability of e-Application.

Exception to Electronic Submission Requirement: You qualify for an exception to the electronic submission requirement, and may submit your application in paper format, if you are unable to submit an application through e-Application because—

• You do not have access to the Internet; or

• You do not have the capacity to upload large documents to e-Application; *and*

• No later than two weeks before the application deadline date (14 calendar days or, if the fourteenth calendar day before the application deadline date falls on a Federal holiday, the next business day following the Federal holiday), you mail or fax a written statement to the Department, explaining which of the two grounds for an exception prevents you from using the Internet to submit your application. If you mail your written statement to the Department, it must be postmarked no later than two weeks before the application deadline date. If you fax your written statement to the Department, we must receive the faxed statement no later than two weeks before the application deadline date.

Address and mail or fax your statement to: Marlene Spencer, U.S. Department of Education, 400 Maryland Avenue, SW., Room 6026, Potomac Center Plaza, Washington, DC 20202–2700. *FAX:* (202) 245–7643.

Your paper application must be submitted in accordance with the mail or hand delivery instructions described in this notice.

b. *Submission of Paper Applications by Mail.*

If you qualify for an exception to the electronic submission requirement, you may mail (through the U.S. Postal Service or a commercial carrier) your application to the Department. You must mail the original and two copies of your application, on or before the application deadline date, to the Department at the following address: U.S. Department of Education, Application Control Center, *Attention:* (CFDA Number 84.133P–1), LBJ Basement Level 1, 400 Maryland Avenue, SW., Washington, DC 20202–4260.

You must show proof of mailing consisting of one of the following:

(1) A legibly dated U.S. Postal Service postmark.

(2) A legible mail receipt with the date of mailing stamped by the U.S. Postal Service.

(3) A dated shipping label, invoice, or receipt from a commercial carrier.

(4) Any other proof of mailing acceptable to the Secretary of the U.S. Department of Education.

If you mail your application through the U.S. Postal Service, we do not accept either of the following as proof of mailing:

(1) A private metered postmark.

(2) A mail receipt that is not dated by the U.S. Postal Service.

If your application is postmarked after the application deadline date, we will not consider your application.

Note: The U.S. Postal Service does not uniformly provide a dated postmark. Before relying on this method, you should check with your local post office.

c. *Submission of Paper Applications by Hand Delivery.*

If you qualify for an exception to the electronic submission requirement, you (or a courier service) may deliver your paper application to the Department by hand. You must deliver the original and two copies of your application, by hand, on or before the application deadline date, to the Department at the following address: U.S. Department of Education, Application Control Center, *Attention:* (CFDA Number 84.133P–1), 550 12th Street, SW., Room 7041, Potomac Center Plaza, Washington, DC 20202–4260.

The Application Control Center accepts hand deliveries daily between 8:00 a.m. and 4:30:00 p.m., Washington, DC time, except Saturdays, Sundays, and Federal holidays.

Note for Mail or Hand Delivery of Paper Applications: If you mail or hand deliver your application to the Department—

(1) You must indicate on the envelope and—if not provided by the Department—in Item 11 of the SF 424 the CFDA number, including suffix letter, if any, of the competition under which you are submitting your application; and

(2) The Application Control Center will mail to you a notification of receipt of your grant application. If you do not receive this grant notification within 15 business days from the application deadline date, you should call the U.S. Department of Education Application Control Center at (202) 245–6288.

V. Application Review Information

Selection Criteria: The selection criteria for this competition are from 34 CFR 350.54 and are listed in the application package.

VI. Award Administration Information

1. *Award Notices:* If your application is successful, we notify your U.S. Representative and U.S. Senators and send you a Grant Award Notification (GAN). We may notify you informally, also.

If your application is not evaluated or not selected for funding, we notify you.

2. *Administrative and National Policy Requirements:* We identify administrative and national policy requirements in the application package and reference these and other requirements in the *Applicable Regulations* section of this notice.

We reference the regulations outlining the terms and conditions of an award in the *Applicable Regulations* section of this notice and include these and other specific conditions in the GAN. The GAN also incorporates your approved application as part of your binding commitments under the grant.

3. *Reporting:* At the end of your project period, you must submit a final performance report, including financial information, as directed by the Secretary. If you receive a multi-year award, you must submit an annual performance report that provides the most current performance and financial expenditure information as directed by the Secretary under 34 CFR 75.118. The Secretary may also require more frequent performance reports under 34 CFR 75.720(c). For specific requirements on reporting, please go to *http://www.ed.gov/fund/grant/apply/appforms/appforms.html.*

4. *Performance Measures:* To evaluate the overall success of its research program, NIDRR assesses the quality of its funded projects through review of grantee performance and products. Each year, NIDRR examines a portion of its grantees to determine the extent to which grantees are conducting high-quality research and related activities that lead to high quality products. Performance measures for the Advanced Rehabilitation and Research program include—

- The percentage of NIDRR-supported fellows, post-doctoral trainees, and doctoral students who publish results of NIDRR-sponsored research in refereed journals.
- The average number of publications per award based on NIDRR-funded research and development activities in refereed journals.
- The percentage of grantee research and development that has an appropriate study design, meets rigorous standards of scientific and/or engineering methods, and builds on and contributes to knowledge in the field.
- The percentage of new grants that include studies funded by NIDRR that assess the effectiveness of interventions, programs, and devices using rigorous and appropriate methods.

NIDRR uses information submitted by grantees as part of their Annual Performance Reports (APRs) to assess performance. NIDRR also determines, using information submitted as part of the grantees' APR, the number of publications in refereed journals that are based on NIDRR-funded research and development activities.

Department of Education program performance reports, which include information on NIDRR programs, are available on the Department's Web site: *http://www.ed.gov/about/offices/list/opepd/sas/index.html.*

VII. Agency Contact

FOR FURTHER INFORMATION CONTACT: Marlene Spencer, U.S. Department of Education, 400 Maryland Avenue, SW., Room 6026, PCP, Washington, DC 20202. Telephone: (202) 245–7532 or by e-mail: *marlene.spencer@ed.gov.*

If you use a TDD, call the Federal Relay Service (FRS), toll free, at 1–800–877–8339.

VIII. Other Information

Accessible Format: Individuals with disabilities can obtain this document and a copy of the application package in an accessible format (e.g., braille, large print, audiotape, or computer diskette) by contacting the Grants and Contracts Services Team, U.S. Department of Education, 400 Maryland Avenue, SW., Room 5075, PCP, Washington, DC 20202–2550. Telephone: (202) 245–7363. If you use a TDD, call the FRS, toll free, at 1–800–877–8339.

Electronic Access to This Document: You can view this document, as well as all other documents of this Department published in the **Federal Register,** in text or Adobe Portable Document Format (PDF) on the Internet at the

following site: *http://www.ed.gov/news/fedregister.*

To use PDF you must have Adobe Acrobat Reader, which is available free at this site.

Note: The official version of this document is the document published in the **Federal Register.** Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available on GPO Access at: *http://www.gpoaccess.gov/nara/index.html.*

Dated: December 7, 2009.

Alexa Posny,

Assistant Secretary for Special Education and Rehabilitative Services.

[FR Doc. E9–29586 Filed 12–10–09; 8:45 am]

BILLING CODE 4000–01–P

U.S. ELECTION ASSISTANCE COMMISSION

Publication of State Plan Pursuant to the Help America Vote Act

AGENCY: U.S. Election Assistance Commission (EAC).

ACTION: Notice.

SUMMARY: Pursuant to sections 254(a)(11)(A) and 255(b) of the Help America Vote Act (HAVA), Public Law 107–252, the U.S. Election Assistance Commission (EAC) hereby causes to be published in the **Federal Register** changes to the HAVA State plans previously submitted by New Jersey and Wisconsin.

DATES: This notice is effective upon publication in the **Federal Register.**

FOR FURTHER INFORMATION CONTACT: Bryan Whitener, Telephone 202–566–3100 or 1–866–747–1471 (toll-free).

SUBMIT COMMENTS: Any comments regarding the plans published herewith should be made in writing to the chief election official of the individual State at the address listed below.

SUPPLEMENTARY INFORMATION: On March 24, 2004, the U.S. Election Assistance Commission published in the **Federal Register** the original HAVA State plans filed by the fifty States, the District of Columbia and the Territories of American Samoa, Guam, Puerto Rico, and the U.S. Virgin Islands. 69 FR 14002. HAVA anticipated that States, Territories and the District of Columbia would change or update their plans from time to time pursuant to HAVA section 254(a)(11) through (13). HAVA sections 254(a)(11)(A) and 255 require EAC to publish such updates. This is the second revision to the State plan for Minnesota.

The amendments to Minnesota's State Plan provide for compliance with the Military and Overseas Voter Empowerment Act (MOVE Act). In accordance with HAVA section 254(a)(12), all the State plans submitted for publication provide information on how the respective State succeeded in carrying out its previous State plan. Minnesota confirms that its amendments to the State plan were developed and submitted to public comment in accordance with HAVA sections 254(a)(11), 255, and 256.

Upon the expiration of thirty days from December 11, 2009, the State is eligible to implement the changes addressed in the plan that is published herein, in accordance with HAVA section 254(a)(11)(C). EAC wishes to acknowledge the effort that went into revising this State plan and encourages further public comment, in writing, to the State election official listed below.

Chief State Election Official

The Honorable Mark Ritchie, Secretary of State, 180 State Office Building, 100 Rev. Dr. Martin Luther King Jr. Blvd., Saint Paul, Minnesota 55155–1299, Phone: (651) 201–1324 or 1(877) 600–8683, Fax: (651) 215–0682.

Thank you for your interest in improving the voting process in America.

Dated: December 7, 2009.

Thomas R. Wilkey,

Executive Director, U.S. Election Assistance Commission.

BILLING CODE 6820–KF–P

The Minnesota State Plan is amended by adding a new Section 14:

Section 14
Use of Requirements Payment Funds to meet the Military and Overseas Voter Empowerment Act

14.1 Electronic Communication of Election Information to UOCAVA Voters

Minnesota will provide voter registration and absentee ballot applications and information related to voting, balloting and election information for UOCAVA voters through the use of a customized website. A link to the site will be available on the Office of the Secretary of State's website and local election administrators will be encouraged to place a link to the site on their own webpages.

14.2 Allowing UOCAVA Voters to Track Marked Ballots

Minnesota will expand the Statewide Voter Registration System to provide a free web-based access mechanism for UOCAVA voters to ascertain the status of their absentee ballot. It will allow voters to determine whether the ballot has been sent to the voter, has been received by the county election office, has been accepted or rejected, and whether a replacement ballot has been issued (to voters whose ballots are lost in transit or rejected).

14.3 Enhancements to the Statewide Voter Registration System

Minnesota will modify the Statewide Voter Registration System in ways that facilitate the administration of voting by UOCAVA voters.

14.4 Budget

Informational Website, Ballot Tracker and Enhancements to SVRS	**$275,000 - $1 million**

Section 12 is amended by adding text to the introduction of the section and by adding new sections 12.6 and 12.7:

The addition of Section 14 to the Minnesota State Plan in 2009 will allow the Minnesota Secretary of State to take the actions necessary to implement the Military and Overseas Voter Empowerment Act.

12.6 2008

- Updated Statewide Voter Registration System to implement electronic ballot delivery to military and overseas voters (UOCAVA voters), add UOCAVA ballot board processing module, and improve domestic absentee ballot processing.
- Conducted 2008 county auditor training conference on general election administration, featuring new procedures for county UOCAVA absentee ballot boards and electronic ballot delivery to UOCAVA voters.
- Provided informational website for UOCAVA voters.

- Updated County Auditor, City Clerk, Election Judge, Mail Election, School Clerk, Town Clerk, Train the Trainer, Election Terminology, Recount, Post Election Review, and Equipment Testing guides for local officials to improve election administration.
- Provided WebX training on use of Statewide Voter Registration System upgrades for county election administrators.
- Upgraded Statewide Voter Registration System to facilitate entry of election day registrations using National Change of Address Data.
- Attended 170 outreach events to provide information on voting procedures and voting rights.
- Upgraded on-line polling place finder to display county-provided precinct sample ballots and polling place maps.

12.7 2009

- Upgraded Statewide Voter Registration System software and infrastructure to facilitate use by designated municipalities for administering absentee voting.
- Trained several municipalities to use the Statewide Voter Registration System to administer absentee voting as part of a plan for statewide availability in 2010.
- Provided Web X training on use of new functionality of statewide voter registration system.
- Upgraded Statewide Voter Registration System to add National Change of Address process to update voter records with changed in-state residential addresses and to cancel registrations for voters who move from Minnesota.
- Created web-based training modules for local officials using Statewide Voter Registration System to administer absentee ballots in federal elections.

Section 13 of the Minnesota State Plan is amended by adding section 13.5, as follows:

13.5 2009 Minnesota State Plan Amendment Advisory Committee Membership Roster

MEMBER	OFFICE / REPRESENTING
Mark Ritchie	Minnesota Secretary of State
Beth Fraser	Dir. of Governmental Affairs, Office of the Secretary of State
Gary Poser	Director of Elections, Office of the Secretary of State
Jim Knoblach	Governor's Office
Senator Joe Gimse	Minnesota Senate (R—Willmar)
Senator Linda Higgins	Minnesota Senate (DFL—Minneapolis)
Rep. Bill Hilty	Minnesota House (DFL—Finlayson)
Rep. Tim Sanders	Minnesota House (R—Blaine)
Col. Eric Ahlness	Minnesota National Guard
Graeme Allen	Minnesota University Students Association
Marcia Avner	Minnesota Council of Nonprofits
Roger Banks	Council on Black Minnesotans
Margot Imdieke Cross	State Council on Disability
Michelle DesJardin	Hennepin County Elections Manager
Eugene Dufault	Association of Minnesota Townships
Dennis Distad	Freeborn County, MN Association of County Officers
Oscar Enchandi	Council on Chicano/Latino Affairs
Kao Ly Her	Council on Asian Pacific Minnesotans
Ann Higgins	League of Minnesota Cities
Pamela Hoopes	Minnesota Disability Law Center
Joe Mansky	Ramsey County Elections Manager
Patty O'Connor	Blue Earth County, MN Association of County Officers
Judy Sanders	National Federation of the Blind
Jolynn Shopteese	Minnesotan American Indian Affairs Council
Scott Simmons	Association of Minnesota Counties
Cynthia Weitzel	Council on Deaf, DeafBlind, and Hard of Hearing Minnesotans
Graeme Allen	Minnesota University Students Association

[FR Doc. E9–29573 Filed 12–10–09; 8:45 am]
BILLING CODE 6820–KF–C

DEPARTMENT OF ENERGY

Environmental Management Site-Specific Advisory Board, Northern New Mexico

AGENCY: Department of Energy.

ACTION: Notice of open meeting.

SUMMARY: This notice announces a meeting of the Environmental Management Site-Specific Advisory Board (EM SSAB), Northern New Mexico. The Federal Advisory Committee Act (Pub. L. No. 92–463, 86 Stat. 770) requires that public notice of this meeting be announced in the **Federal Register**.

DATES: Wednesday, January 27, 2010, 1 p.m.–8 p.m.

ADDRESSES: Holiday Inn Santa Fe, 4048 Cerillos Road, Santa Fe, New Mexico.

FOR FURTHER INFORMATION CONTACT: Menice Santistevan, Northern New Mexico Citizens' Advisory Board (NNMCAB), 1660 Old Pecos Trail, Suite B, Santa Fe, NM 87505. Phone (505) 995–0393; Fax (505) 989–1752 or E-mail: *msantistevan@doeal.gov.*

SUPPLEMENTARY INFORMATION:

Purpose of the Board: The purpose of the Board is to make recommendations to DOE in the areas of environmental restoration, waste management, and related activities.

Tentative Agenda

1 p.m. Call to Order by Co-Deputy Designated Federal Officers, Ed Worth and Lee Bishop;
Establishment of a Quorum, Lorelei Novak;
- Roll Call;
- Excused Absences;

Welcome and Introductions, Ralph Phelps;
Approval of Agenda;
Approval of November 18, 2009 Meeting Minutes.
1:15 p.m. Old Business;
- Written reports;
- Other items.

1:45 p.m. New Business.
2 p.m. Co-Deputy Designated Federal Officers' Report, Ed Worth and Lee Bishop.
2:30 p.m. Open Forum for Board Members.
3 p.m. Break.
3:15 p.m. Presentation on Status of Corrective Actions.
5 p.m. Dinner Break.
6 p.m. Public Comment Period.
6:15 p.m. Consideration and Action on Recommendation(s).
7 p.m. Presentation on Natural Resource Damage Assessment, Nancy Werdel.
7:45 p.m. Meeting Feedback.
8 p.m. Adjourn, Ed Worth and Lee Bishop.

Public Participation: The EM SSAB, Northern New Mexico, welcomes the attendance of the public at its advisory committee meetings and will make every effort to accommodate persons with physical disabilities or special needs. If you require special accommodations due to a disability, please contact Menice Santistevan at least seven days in advance of the meeting at the telephone number listed above. Written statements may be filed with the Board either before or after the meeting. Individuals who wish to make oral statements pertaining to agenda items should contact Menice Santistevan at the address or telephone number listed above. Requests must be received five days prior to the meeting and reasonable provision will be made to include the presentation in the agenda. The Deputy Designated Federal Officer is empowered to conduct the meeting in a fashion that will facilitate the orderly conduct of business. Individuals wishing to make public comments will be provided a maximum of five minutes to present their comments.

Minutes: Minutes will be available by writing or calling Menice Santistevan at the address or phone number listed above. Minutes and other Board documents are on the Internet at: *http://www.nnmcab.org/*.

Issued at Washington, DC on December 8, 2009.

Rachel Samuel,

Deputy Committee Management Officer.

[FR Doc. E9–29543 Filed 12–10–09; 8:45 am]
BILLING CODE 6405–01–P

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–8986–5]

Environmental Impact Statements and Regulations; Availability of EPA Comments

Availability of EPA comments prepared pursuant to the Environmental Review Process (ERP), under section 309 of the Clean Air Act and Section 102(2)(c) of the National Environmental Policy Act as amended. Requests for copies of EPA comments can be directed to the Office of Federal Activities at 202–564–7146 or *http://www.epa.gov/compliance/nepa/*. An explanation of the ratings assigned to draft environmental impact statements (EISs) was published in FR dated July 17, 2009 (74 FR 34754).

Draft EISs

EIS No. 20090313, ERP No. D–AFS–K65379–CA, Freds Fire Reforestation Project, Implementation, EL Dorado National Forest, Placerville and Pacific Ranger Districts, El Dorado County, CA.

Summary: EPA expressed environmental concerns about the quality of herbicide toxicity data and the clarity of information presented in comparing alternatives. Rating EC2.

EIS No. 20090329, ERP No. D–DOE–H09800–KS, Abengoa Biorefinery Project, To Support the Design, Construction, and Startup of a Commercial-Scale Integrated Biorefinery, Federal Funding, Located near the City Hugoton, Stevens County, KS.

Summary: EPA expressed environmental concerns about impacts to groundwater resources and the lack of information on biomass harvest sustainability and disposition of solid waste during construction/operation. EPA also noted that air quality modeling will require an update due to project design changes. Rating EC2.

EIS No. 20090344, ERP No. D–AFS–J65549–WY, Rattlesnake Forest Management Project, Proposes to Implement Multiple Resource Management Action, Bearlodge Ranger District, Black Hills National Forest, Crook County, WY.

Summary: EPA expressed environmental concerns about air quality impacts, and requested additional air quality information and mitigation. Rating EC2.

EIS No. 20090352, ERP No. D–FHW–E40829–NC, Elizabeth Brady Road (NC–1879) Extension Project, Widening and Extension of NC–1879 from the Intersection of NC–86 with US 70 Business to North of US–70 Bypass at the Intersection of St. Mary's Road NC–1002, Hillsborough Central Business, Orange County, NC.

Summary: EPA expressed environmental concerns about stream impacts, riparian buffer impacts, historic property impacts, and impacts to prime farmlands. Rating EC2.

Final EISs

EIS No. 20090331, ERP No. F–COE–K39116–CA, San Pedro Waterfront Project, Proposed Specific Development Project and Associated Infrastructure Improvements on

Approximately 400 Acres, Currently Operated by Los Angeles Harbor Department (LAHD), Located along the West Side of Los Angeles Harbor's Main Channel, from the Vincent Thomas Bridge to Cabrillo Beach, US Army Section 10 and 404 and Section 103 Marine Protection, Research, and Sanctuaries Act Permits, (MPRSA) City of Los Angeles, CA.

Summary: EPA continues to have concerns about the unavoidable air quality impacts to environmental justice communities.

EIS No. 20090335, ERP No. F–AFS–K65341–AZ, Black River Exchange Project, Proposal to Exchange Federal and Non-Federal Lands, Apache-Sitgreaves National Forests, Apache County, AZ.

Summary: EPA does not object to the proposed project.

EIS No. 20090347, ERP No. F–AFS–J65512–MT, Butte Lookout Project, Proposed Timber Harvest, Prescribed Burning, Road Work and Management Activities, Missoula Ranger District, Lola National Forest, Missoula County, MT.

Summary: EPA continues to have environmental concerns because significant portions of the proposed rehabilitative and restorative work are not currently funded. EPA encouraged timely funding of the remainder of the proposed rehabilitative and restorative work.

EIS No. 20090351, ERP No. F–AFS–J65503–WY, Thunder Basin National Grassland Prairie Dog Management Strategy, Land and Resource Management Plan Amendment #3, Proposes to Implement a Site-Specific Strategy to Manage Black Trailed Prairie Dog, Douglas Ranger District, Medicine Bow-Routt National Forests and Thunder Basin National Grassland, Campbell, Converse, Niobrara and Weston Counties, WY.

Summary: EPA continues to have environmental concerns About impacts to black-footed ferret habitat.

EIS No. 20090354, ERP No. F–USN–K11023–00, West Coast Basing of the MV–22 Determining Basing Location(s) and Providing Efficient Training Operations, CA, AZ.

Summary: EPA expressed environmental concerns about project-related noise impacts.

EIS No. 20090355, ERP No. F–AFS–K65361–CA, Thom-Seider Vegetation Management and Fuels Reduction Project, To Respond to the Increasing Density and Fuels Hazard Evident along the Klamath River between Hamburg and Happy Camp, Klamath National Forest, Siskiyou County, CA.

Summary: EPA does not object to the proposed project.

EIS No. 20090357, ERP No. F–NPS–H65028–MO, Jefferson National Expansion Memorial, General Management Plan, Implementation, St. Louis, MO.

Summary: EPA does not object to the proposed project.

EIS No. 20090359, ERP No. F–FHW–H40194–MO, MO–63 Corridor Improvement Project, To Correct Roadway Deficiencies, Reduce Congestion and Provide Continuity along the MO–63 Corridor on the Existing Roadway and on New Location, Osage, Maries and Phelps Counties, MO.

Summary: EPA continues to have environmental concerns about stream and wetland impacts, and requested additional mitigation.

EIS No. 20090361, ERP No. F–NOA–A91073–00, Programmatic—Toward an Ecosystem Approach for the Western Pacific Region: From Species-Based Fishery Management Plans to Place-Based Fishery Ecosystem Plans, Bottomfish and Seamount Groundfish, Coral Reef Ecosystems, Crustaceans, Precious Corals, Pelagics, Implementation, American Samoa, Commonwealth of the Northern Mariana Islands, Hawaii, U.S. Pacific Remote Island Area.

Summary: No formal comment letter sent to the preparing agency.

Dated: December 12, 2009.

Robert W. Hargrove,

Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. E9–29561 Filed 12–10–09; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–8986–4]

Environmental Impacts Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564–1399 or *http://www.epa.gov/compliance/nepa/.*

Weekly receipt of Environmental Impact Statements.

Filed 11/30/2009 Through 12/04/2009. Pursuant to 40 CFR 1506.9.

EIS No. 20090413, Final EIS, USFS, NV, Martin Basin Rangeland Project, Reauthorizing Grazing on Eight Existing Cattle and Horse Allotments: Bradshaw, Buffalo, Buttermilk, Granite Peak, Indian, Martin Basin, Rebel Creek, and West Side Flat Creek, Santa Rosa Ranger District, Humboldt-Toiyabe National Forest, NV, Wait Period Ends: 01/11/2010, Contact: Vernon Keller 775–355–5056.

EIS No. 20090414, Draft EIS, USFS, UT, Tropic to Hatch 138kV Transmission Line Project, Proposing Construction of a new 138 kV transmission Line that would replace some or all the existing 69 kV Transmission Line, Applications for Special-Use Permits and/or Right-of-Way Grants, Grand Staircase-Escalante National Monument Management Plan Amendment, Garfield County, UT, Comment Period Ends: 03/10/2010, Contact: Susan Baughman 435–865–3703.

EIS No. 20090415, Final EIS, FHWA, MI, Detroit Intermodal Freight Terminal (DIFT) Project, Proposes Improvement to Intermodal Freight Terminals in Wayne and Oakland Counties, MI, Wait Period Ends: 01/11/2010, Contact: David T. Williams 517–702–1820.

EIS No. 20090416, Final EIS, USMC, NC, U.S. Marine Corps Grow the Force at MCB Camp Lejeune, MCAS New River, and MCAS Cherry Point, To Provide the Infrastructure to Support the Permanent Increases at these three Installation, US Army Corps Section 404 and 10 Permits, City of Jacksonville, NC, Wait Period Ends: 01/11/2010, Contact: Michael H. Jones 757–322–4942.

EIS No. 20090417, Final EIS, NOAA, 00, Comprehensive Ecosystem-Base Amendment 1 (CE–BA 1) for the South Atlantic Region, Implementation, Wait Period Ends: 01/11/2010, Contact: Roy E. Crabtree, PhD 727–824–5305

EIS No. 20090418, Draft EIS, USACE, NC, The Town of Nags Head Beach Nourishment Project, Propose to Utilize a Self-Contained Hooper Dredge and Other Feasible Dredging Equipment during a Proposed Construction Window from April through September, Dare County, NC, Comment Period Ends: 01/25/2010, Contact: Raleigh Bland 910–251–4564.

EIS No. 20090419, Draft EIS, USACE, MN, U.S. Steel Keetac Taconite Mine Expansion Project, Propose to Restart an Idled Production Line and Expand Contiguous Sections of the Open Pit Iron Ore Mine, located near Keewatin, Itasca and St. Louis Counties, MN, Comment Period Ends: 01/27/2010, Contact: Ralph Augustin 651–290–5378.

EIS No. 20090420, Final EIS, FHWA, IN, I–69 Evansville to Indianapolis, Indiana Project, Section 3, Washington to Crane NSWC (US 50 to US 231), Daviess, Greene, Knox and Martin Counties, IN, Wait Period Ends: 01/11/2010, Contact: Janice Osadczuk 317–226–7486.

EIS No. 20090421, Draft Supplement, NRC, WY, Moore Ranch In-Situ Uranium Recovery (ISR) Project, Proposal to Construct, Operate, Conduct Aquifer Restoration, and Decommission an In-Situ Recovery (ISR) Facility, NUREG–1910, Campbell County, WY, Comment Period Ends: 02/01/2010, Contact: Behram Shroff 301–415–0666.

EIS No. 20090422, Final EIS, BR, KS, Equus Beds Aquifer Storage Recharge and Recovery Project, To Provide Municipal and Industrial (M&I) Water to City and Surrounding Region, Equus Beds Division, Wichita Project, Kansas, Harvey, Sedgwick, and Reno Counties, KS, Wait Period Ends: 01/11/2010, Contact: Charles F. Webster 405–470–4831.

EIS No. 20090423, Second Draft Supplement, NRC, WY, Nichols Ranch In-Situ Uranium Recovery (ISR) Project, Proposal to Construct, Operate, Conduct Aquifer Restoration, and Decommission and In-Situ Recovery Uranium Milling Facility, Campbell and Johnson Counties, WY, Comment Period Ends: 02/01/2010, Contact: Irene Yu 301–415–1951.

EIS No. 20090424, Draft EIS, USN, AK, Gulf of Alaska Navy Training Activities, Proposal to Support and Conduct Current, Emering, and Future Training Activities, Implementation, Gulf of Alaska, AK, Comment Period Ends: 01/25/2010, Contact: Amy Burt 360–396–9024.

EIS No. 20090425, Third Draft Supplement, NRC, WY, Lost Creek In-Situ Uranium Recovery (ISR) Project, Proposal to Construct, Operate, Conduit Aquifer Restoration, and Decommission an In-Situ Recovery (ISR) Uranium Milling Facility, Sweetwater County, WY, Comment Period Ends: 02/01/2010, Contact: Alan B. Bjornsen 301–415–1195.

EIS No. 20090426, Draft EIS, FRA, VA, Richmond and the Hampton Roads Passenger Rail Project, Proposed Higher Speed Intercity Passenger Rail, VA, Comment Period Ends: 01/25/2010, Contact: John Winkle 202–493–6067.

EIS No. 20090427, Final EIS, NPS, MN, Disposition of Bureau of Mines Property, Twin Cities Research Center Main Campus, Implementation, Hennepin County, MN, Wait Period Ends: 01/11/2010, Contact: Steven P. Johnson 651–290–3030 Ext. 223.

Amended Notices

EIS No. 20090312, Draft EIS, USACE, OH, Cleveland Harbor Dredged Material Management Plan, Operations and Maintenance, Cuyahoga County, OH, Comment Period Ends: 02/01/2010, Contact: Frank O'Connor 716–879–4131. Revision to FR Notice Published 09/11/2009: Extending Comment Period from 12/07/2009 to 02/01/2010.

EIS No. 20090394, Draft EIS, USN, GU, Guam and Commonwealth of the Northern Mariana Islands (CNMI) Military Relocation, Proposed Relocating Marines from Okinawa, Visiting Aircraft Carrier Berthing, and Army Air and Missile Defense Task Force, Implementation, GU, Comment Period Ends: 02/17/2010, Contact: Kyle Fujimoto 808–472–1442. Revision to FR Notice Published 11/20/2009: Disregard the FR Notice of 11/28/2009: Correction to Comment Period from 01/04/2010 to 02/17/2010.

Dated: 12/08/2009.

Robert W. Hargrove,

Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. E9–29562 Filed 12–10–09; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–9090–1]

Issuance of a Final NPDES General Permit (GP) for Offshore Seafood Processors Discharging in Federal Waters Off the Alaska Shore (Permit Number AKG–524–000)

AGENCY: Environmental Protection Agency (EPA).

ACTION: Issuance of Final NPDES General Permit.

SUMMARY: On September 26, 2008, the Director, Office of Water and Watersheds, EPA Region 10, proposed to issue a general permit to cover offshore seafood processors discharging seafood processing waste off the shore of Alaska. During the 76-day comment period, EPA received comments from 11 people and has prepared a Response to Comments document to explain changes made in the permit and reasons for not making changes that were requested.

DATES: The permit will become effective March 1, 2010 and will expire February 28, 2015. The permit issuance date is December 28, 2009.

ADDRESSES: Copies of the General Permit and the Response to Comments may be requested from Audrey Washington, EPA Region 10, 1200 Sixth Avenue, Suite 900, OWW–130, Seattle, WA 98101–3140, by phone at (206) 553–0523, or by e-mail: *washington.audrey@epa.gov.*

FOR FURTHER INFORMATION CONTACT: Copies of the general permit and response to comments are available on the EPA Region 10 Web site at *http://yosemite.epa.gov/R10/WATER.NSF/NPDES+Permits/General+NPDES+Permits.*

SUPPLEMENTARY INFORMATION

A. Endangered Species Act

Section 7 of the Endangered Species Act requires EPA to consult with the U.S. Fish and Wildlife Service and National Marine Fisheries Service regarding the potential effects that an action may have on listed endangered or threatened species or their critical habitat. To address these ESA requirements, and in support of EPA's informal consultation with the Services, a Biological Evaluation (BE) was prepared to analyze these potential effects. The results of the BE concluded that discharges from Offshore Seafood Processing facilities will either have no effect or are not likely to adversely affect threatened or endangered species, their critical habitat, or essential fish habitat in the vicinity of the discharge. After reviewing the BE and permit the Services concurred with EPA's findings.

B. Executive Order 12866

The Office of Management and Budget has exempted this action from the review requirements of Executive Order 12866 pursuant to Section 6 of that order.

C. Paperwork Reduction Act

The information collection requirements of this permit were previously approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and assigned OMB control numbers 2040–0086 (NPDES permit application) and 2040–0004 (discharge monitoring reports).

D. Unfunded Mandates Reform Act

Section 201 of the Unfunded Mandates Reform Act (UMRA), Public Law 104–4, generally requires federal agencies to assess the effects of their ''regulatory actions'' (defined to be the same as ''rules'' subject to the RFA) on tribal, state, and local governments and the private sector. However, general

NPDES permits are not ''rules'' subject to the requirements of 5 U.S.C. 553(b) and are therefore not subject to the UMRA.

E. Appeal of Permits

Any interested person may appeal the general permit in the Federal Court of Appeals in accordance with Section 509(b)(1) of the Clean Water Act. This appeal must be filed within 120 days after the permit issuance date. Persons affected by the permits may not challenge the conditions of the permits in further EPA proceedings (*See* 40 CFR 124.19). Instead they may either challenge the permit in court or apply for an individual NPDES permit.

Dated: December 1, 2009.

Michael A. Bussell,

Director, Office of Water & Watersheds, Region 10, U.S. Environmental Protection Agency.

[FR Doc. E9–29598 Filed 12–10–09; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–9091–1; Docket ID No. EPA–HQ–ORD–2009–0791]

Draft Toxicological Review of Trichloroethylene: In Support of the Summary Information in the Integrated Risk Information System (IRIS)

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of Listening Session.

SUMMARY: EPA is announcing a listening session to be held on January 12, 2010, during the public comment period for the external review draft document entitled, ''Toxicological Review of Trichloroethylene: In Support of Summary Information on the Integrated Risk Information System (IRIS)'' (EPA/635/R–09/011A). The draft document was prepared by the National Center for Environmental Assessment (NCEA) within the EPA's Office of Research and Development (ORD). This listening session is a step in EPA's revised IRIS process, announced on May 21, 2009, to develop human health assessments for inclusion in the IRIS database. The purpose of the listening session is to allow all interested parties to present scientific and technical comments on draft IRIS health assessments to EPA and other interested parties during the public comment period and before the external peer review meeting. The public comment period and the EPA Science Advisory Board (SAB) peer-review workshop, which will be scheduled at a later date and announced in the **Federal Register**, are separate processes. EPA welcomes the scientific and technical comments that will be provided to the Agency by the listening session participants. The comments will be considered by the Agency as it revises the draft assessment in response to the independent external peer review and public comments. All presentations submitted in accordance with the instructions below will become part of the official public record.

The EPA's draft assessment and peer review charge are available via the Internet on the National Center for Environmental Assessment's (NCEA) home page under the Recent Additions and Publications menus at *http://www.epa.gov/ncea.*

DATES: The listening session on the draft IRIS health assessment for trichloroethylene will be held on January 12, 2010, beginning at 9 a.m. and ending at 4 p.m., Eastern Standard Time. If you want to make a presentation at the listening session, you should register by January 5, 2010, indicate that you wish to make oral comments at the session, and indicate the length of your presentation. When you register, please indicate if you will need audio-visual aid (*e.g.,* lap top and slide projector). In general, each presentation should be no more than 30 minutes. If, however, there are more requests for presentations than the allotted time allows, then the time limit for each presentation will be adjusted. A copy of the agenda for the listening session will be available at the meeting. If no speakers have registered by January 5, 2010, the listening session will be cancelled and EPA will notify those registered of the cancellation.

The public comment period for review of this draft assessment was announced previously in the **Federal Register** (FR) (74 FR 56834) on November 3, 2009. As stated in that FR notice, the public comment period began on November 3, 2009, and ends February 1, 2010. Any technical comments submitted during the public comment period should be in writing and must be received by EPA by February 1, 2010. Only those public comments submitted using the procedures identified in the November 3, 2009, FR notice by the February 1, 2010, deadline will be provided to the peer-review panel prior to the SAB peer-review workshop. The date and logistics for the SAB peer-review meeting will be announced later in a separate FR notice.

Listening session participants who want EPA to share their comments with the external peer reviewers should also submit written comments during the public comment period using the detailed and established procedures included in the aforementioned FR notice of November 3, 2009. Comments submitted to the docket prior to the end of the public comment period will be submitted to the external peer reviewers and considered by EPA in the disposition of public comments. All comments must be submitted to the docket, but comments received after the public comment period closes will not be submitted to the external peer reviewers.

ADDRESSES: The listening session on the draft trichloroethylene assessment will be held at the EPA offices at Potomac Yard North, Room 4830N, 2733 South Crystal Drive, Arlington, Virginia, 22202. To attend the listening session, register by Tuesday, January 5, 2010, via the internet at *https://www2.ergweb.com/projects/conferences/peerreview/register-tce.htm.* You may also register by e-mail at *meetings@erg.com* (subject line: Trichloroethylene Listening Session), by phone: 781–674–7374 or toll free at 800–803–2833 (ask for Laurie Stamatatos), or by faxing a registration request to 781–674–2906 (please reference the ''Trichloroethylene Listening Session'' and include your name, title, affiliation, full address, and contact information).

Please note that to gain entrance to this EPA building to attend the meeting, attendees must have photo identification with them and must register at the guard's desk in the lobby. The guard will retain your photo identification and will provide you with a visitor's badge. At the guard's desk, attendees should give the name Christine Ross and the telephone number, 703–347–8592, to the guard on duty. The guard will contact Ms. Ross who will meet you in the reception area to escort you to the meeting room. When you leave the building, please return your visitor's badge to the guard and you will receive your photo identification.

A teleconference line will also be available for registered attendees/speakers. The teleconference number is 866–299–3188 and the access code is 926–378–7897, followed by the pound sign (#). The teleconference line will be activated at 8:45 a.m., and you will be asked to identify yourself and your affiliation at the beginning of the call.

Information on Services for Individuals with Disabilities: EPA welcomes public attendance at the ''Trichloroethylene Listening Session'' and will make every effort to accommodate persons with disabilities.

For information on access or services for individuals with disabilities, please contact Christine Ross at 703–347–8592 or *ross.christine@epa.gov.* To request accommodation of a disability, please contact Ms. Ross, preferably at least 10 days prior to the meeting, to give EPA as much time as possible to process your request.

FOR FURTHER INFORMATION CONTACT: For information on the public listening sessions, please contact Christine Ross, IRIS Staff, National Center for Environmental Assessment, (8601P), U.S. EPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460; telephone: 703–347–8592; facsimile: 703–347–8689; or e-mail: *ross.christine@epa.gov.* If you have questions about the draft trichloroethylene assessment, contact Weihsueh Chiu, National Center for Environmental Assessment, (8601P), U.S. EPA, 1200 Pennsylvania Avenue, NW., Washington, DC 20460; telephone: 703–347–8607; facsimile: 703–347–8689; or e-mail: *chiu.weihsueh@epa.gov.*

SUPPLEMENTARY INFORMATION: IRIS is a database that contains potential adverse human health effects information that may result from chronic (or lifetime) exposure to specific chemical substances found in the environment. The database (available on the internet at *http://www.epa.gov/iris*) contains qualitative and quantitative health effects information for more than 540 chemical substances that may be used to support the first two steps (hazard identification and dose-response evaluation) of a risk assessment process. When supported by available data, the database provides oral reference doses (RfDs) and inhalation reference concentrations (RfCs) for chronic health effects, and oral slope factors and inhalation unit risks for carcinogenic effects. Combined with specific exposure information, government and private entities can use IRIS data to help characterize public health risks of chemical substances in a site-specific situation and thereby support risk management decisions designed to protect public health.

This listening session is a step in EPA's revised process, announced on May 21, 2009, for development of human health assessments for inclusion on IRIS. The updated process is posted on the IRIS home page at *http://www.epa.gov/iris.*

Dated: December 1, 2009.

Rebecca Clark,

Acting Director, National Center for Environmental Assessment.

[FR Doc. E9–29594 Filed 12–10–09; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL DEPOSIT INSURANCE CORPORATION

Notice of Agency Meeting

Pursuant to the provisions of the ''Government in the Sunshine Act'' (5 U.S.C. 552b), notice is hereby given that the Federal Deposit Insurance Corporation's Board of Directors will meet in open session at 10 a.m. on Tuesday, December 15, 2009, to consider the following matters:

Summary Agenda: No substantive discussion of the following items is anticipated. These matters will be resolved with a single vote unless a member of the Board of Directors requests that an item be moved to the discussion agenda.

Disposition of Minutes of Previous Board of Directors' Meetings:

Summary reports, status reports, reports of the Office of Inspector General, and reports of actions taken pursuant to authority delegated by the Board of Directors.

Memorandum and resolution re: Designated Reserve Ratio for 2010.

Memorandum and resolution re: 2009 Receivership Budget.

Memorandum and resolution re: Proposed Corporate Investment Policy (2009).

Personnel Matter.

Discussion Agenda:

Memorandum and resolution re: Rulemaking on Treatment by the FDIC as Conservator or Receiver of Financial Assets Transferred by an Insured Depository Institution in Connection with a Securitization or Participation.

Memorandum and resolution re: Final Rule to Amend the General Risk-Based Capital Rule to Reflect the Issuance of FAS 166 and FAS 167.

Memorandum and resolution re: Proposed 2010 Corporate Operating Budget.

The meeting will be held in the Board Room on the sixth floor of the FDIC Building located at 550 17th Street, NW., Washington, DC.

This Board meeting will be Webcast live via the Internet and subsequently made available on-demand approximately one week after the event. Visit *http://www.vodium.com/goto/fdic/boardmeetings.asp* to view the event. If you need any technical assistance, please visit our Video Help page at: *http://www.fdic.gov/video.html.*

The FDIC will provide attendees with auxiliary aids (*e.g.,* sign language interpretation) required for this meeting. Those attendees needing such assistance should call (703) 562–6067 (Voice or TTY), to make necessary arrangements.

Requests for further information concerning the meeting may be directed to Mr. Robert E. Feldman, Executive Secretary of the Corporation, at (202) 898–7043.

Dated: December 8, 2009.

Federal Deposit Insurance Corporation.

Robert E. Feldman,

Executive Secretary.

[FR Doc. E9–29634 Filed 12–9–09; 11:15 am]

BILLING CODE 6714–01–P

FEDERAL RESERVE SYSTEM

Change in Bank Control Notices; Acquisition of Shares of Bank or Bank Holding Companies

The notificants listed below have applied under the Change in Bank Control Act (12 U.S.C. 1817(j)) and § 225.41 of the Board's Regulation Y (12 CFR 225.41) to acquire a bank or bank holding company. The factors that are considered in acting on the notices are set forth in paragraph 7 of the Act (12 U.S.C. 1817(j)(7)).

The notices are available for immediate inspection at the Federal Reserve Bank indicated. The notices also will be available for inspection at the office of the Board of Governors. Interested persons may express their views in writing to the Reserve Bank indicated for that notice or to the offices of the Board of Governors. Comments must be received not later than December 28, 2009.

A. Federal Reserve Bank of Minneapolis (Jacqueline G. King, Community Affairs Officer) 90 Hennepin Avenue, Minneapolis, Minnesota 55480–0291:

1. Cullen Thompson, Barton Thompson, both of Houston, Texas, and Betsy Lehman, Fort Morgan, Colorado, to join a group acting in concert, consisting of Carveth and Margaret Thompson, Lead, South Dakota; Gary and Nancy Vance, Faith, South Dakota; Eldon Jensen, Lemmon, South Dakota; and Morris Gustafson, Faith, South Dakota; and acquire voting shares of Faith Bank Holding Company, and thereby indirectly acquire voting shares of Farmers State Bank, Faith, South Dakota.

Board of Governors of the Federal Reserve System, December 8, 2009.

Robert deV. Frierson,

Deputy Secretary of the Board.

[FR Doc. E9–29563 Filed 12–10–09; 8:45 am]

BILLING CODE 6210–01–S

FEDERAL RESERVE SYSTEM

Formations of, Acquisitions by, and Mergers of Bank Holding Companies

The companies listed in this notice have applied to the Board for approval, pursuant to the Bank Holding Company Act of 1956 (12 U.S.C. 1841 *et seq.*) (BHC Act), Regulation Y (12 CFR Part 225), and all other applicable statutes and regulations to become a bank holding company and/or to acquire the assets or the ownership of, control of, or the power to vote shares of a bank or bank holding company and all of the banks and nonbanking companies owned by the bank holding company, including the companies listed below.

The applications listed below, as well as other related filings required by the Board, are available for immediate inspection at the Federal Reserve Bank indicated. The applications also will be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing on the standards enumerated in the BHC Act (12 U.S.C. 1842(c)). If the proposal also involves the acquisition of a nonbanking company, the review also includes whether the acquisition of the nonbanking company complies with the standards in section 4 of the BHC Act (12 U.S.C. 1843). Unless otherwise noted, nonbanking activities will be conducted throughout the United States. Additional information on all bank holding companies may be obtained from the National Information Center website at *www.ffiec.gov/nic/*.

Unless otherwise noted, comments regarding each of these applications must be received at the Reserve Bank indicated or the offices of the Board of Governors not later than January 7, 2010.

A. Federal Reserve Bank of Minneapolis (Jacqueline G. King, Community Affairs Officer) 90 Hennepin Avenue, Minneapolis, Minnesota 55480–0291:

1. First State Bank Southwest 2002 Amended and Restated KSOP Plan and Trust, Worthington, Minnesota; to acquire 28.702 percent of the voting shares of First Rushmore Bancorporation, Inc., Worthington, Minnesota, and thereby indirectly acquire voting shares of First State Bank Southwest, Pipestone, Minnesota.

Board of Governors of the Federal Reserve System, December 8, 2009.

Robert deV. Frierson,

Deputy Secretary of the Board.

[FR Doc. E9–29564 Filed 12–10–09; 8:45 am]

BILLING CODE 6210–01–S

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration for Children and Families

Proposed Information Collection Activity; Comment Request

Proposed Projects:

Title: ANA Project Impact Assessment Survey.

OMB No.: New Collection.

Description: The information collected by the Project Impact Assessment Survey is needed for two main reasons:

(1) To collect crucial information required to report on the Administration for Native Americans' (ANA) established Government Performance and Results Act (GPRA) measures, and

(2) To properly abide by ANA's congressionally-mandated statute (42 United States Code 2991 *et seq.*) found within the Native American Programs Act of 1974, as amended, which states that ANA will evaluate projects assisted through ANA grant dollars ''including evaluations that describe and measure the impact of such projects, their effectiveness in achieving stated goals, their impact on related programs, and their structure and mechanisms for delivery of services.'' The information collected with this survey will fulfill ANA's statutory requirement and will also serve as an important planning and performance tool for ANA.

Respondents: Tribal Governments, Native American nonprofit organizations, and Tribal Colleges and Universities.

ANNUAL BURDEN ESTIMATES

Instrument	Number of respondents	Number of responses per respondent	Average burden hours per response	Total burden hours
ANA Project Impact Assessment Survey	85	1	6	510

Estimated Total Annual Burden Hours: 510.

In compliance with the requirements of Section 506(c)(2)(A) of the Paperwork Reduction Act of 1995, the Administration for Children and Families is soliciting public comment on the specific aspects of the information collection described above. Copies of the proposed collection of information can be obtained and comments may be forwarded by writing to the Administration for Children and Families, Office of Administration, Office of Information Services, 370 L'Enfant Promenade, SW., Washington, DC 20447, Attn: ACF Reports Clearance Officer. E-mail address: *infocollection@acf.hhs.gov.* All requests should be identified by the title of the information collection.

The Department specifically requests comments on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted within 60 days of this publication.

Dated: December 8, 2009.

Robert Sargis,

Reports Clearance Officer.

[FR Doc. E9–29520 Filed 12–10–09; 8:45 am]

BILLING CODE 4184–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Submission for OMB Review; Comment Request; Evaluation of the NIAID HIV Vaccine Research Education Initiative

SUMMARY: Under the provisions of Section 3507(a)(1)(D) of the Paperwork Reduction Act of 1995, the National Institute of Allergy and Infectious Diseases (NIAID), the National Institutes of Health (NIH) has submitted to the Office of Management and Budget (OMB) a request to review and approve the information collection listed below. This proposed information collection was previously published in the **Federal Register** on October 16, 2009, pages 53259–53260 and allowed 60 days for public comment. Three public comments were received and responses were sent to each person. The purpose of this notice is to allow an additional 30 days for public comment. The National Institutes of Health may not conduct or sponsor, and the respondent is not required to respond to, an information collection that has been extended, revised, or implemented on or after October 1, 1995, unless it displays a currently valid OMB control number.

Proposed Collection: Title: Evaluation of the NIAID HIV Vaccine Research Education Initiative Highly Impacted Population Survey. *Type of Information Collection Request:* NEW. *Need and Use of Information Collection:* Developing measures that protect against HIV infection is one of NIAID's highest priorities. Methods in development for the prevention of HIV infection include HIV vaccines, microbicides, and pre-exposure prophylaxis (PrEP). Given the daunting complexity of the HIV virus, developing these methods will ultimately require tens of thousands of volunteers to participate in HIV preventive clinical trials. In the United States, minority participation in clinical trials of HIV prevention technologies is essential; nearly two-thirds of people diagnosed with HIV in the United States are African American or Hispanic/Latino. Historically, recruitment of racial/ethnic populations has been a critical challenge for medical researchers, and initiatives to increase recruitment of these groups into cancer and chronic disease trials have only been partially successful.

To address the need for volunteers in HIV vaccine clinical trials and enable NIAID to fulfill its Congressional mandate to prevent infectious diseases like HIV/AIDS, NIAID created the NIAID HIV Vaccine Research Education Initiative (NHVREI). The goal of NHVREI is to increase knowledge about and support for HIV vaccine research among U.S. populations most heavily affected by HIV/AIDS—in particular, African Americans, Hispanics/Latinos, men who have sex with men (MSM), women, and youth, recognizing the intersection of these groups.

A critical component of NHVREI is outreach to members of these specific highly impacted populations. With the assistance of funded community-based and national organizations, NHVREI is designing, developing, and disseminating HIV vaccine research-related messages to NHVREI target audiences. These messages are delivered through print (*e.g.,* brochures, posters, fact sheets, information kits), radio, TV, and Internet resources. Print materials are distributed through various NHVREI program activities (*e.g.,* trainings, conferences, symposia) and other NIAID-funded partners, governmental and non-governmental organizations.

NIAID is conducting an evaluation of the NHVREI program in order to assess its impact and generate key findings applicable toward the design of future educational initiatives. Part of the evaluation includes a population survey to guide future NHVREI activities.

With this document, NIAID requests clearance for the third part of the evaluation, a survey of the general population and members of the U.S. populations most heavily impacted by HIV/AIDS. The survey will be conducted once in 2010. The total number of respondent burden hours will not exceed 1,167 annually. *Frequency of Response:* Once. *Affected Public:* Individuals. *Type of Respondents:* General U.S. population with oversampling of subpopulations highly impacted by HIV. The annual reporting burden is shown in the table below. There are no Capital Costs to report. There are no Operating or Maintenance Costs to report.

	Total # of respondents	Hours per response	Total hours
Highly Impacted Population Surveys	3,500	0.33333	1,167

Request for Comments: Written comments and/or suggestions from the public and affected agencies are invited on one or more of the following points: (1) Whether the proposed collection of information is necessary for the proper performance of the function of the agency, including whether the information will have practical utility; (2) The accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (3) Ways to enhance the quality, utility, and clarity of the information to be collected; and (4) Ways to minimize the burden of the collection of information on those who are to respond, including the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

For Further Information: Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the Office of Management and Budget, Office of Regulatory Affairs, *OIRA_submission@omb.eop.gov,* or by fax to 202–395–6974, Attention: Desk Officer for NIH. To request more information on the proposed project or to obtain a copy of the data collection plans and instruments, contact Katharine Kripke, Assistant Director, Vaccine Research Program, Division of AIDS, NIAID, NIH, 6700B Rockledge Dr., Bethesda, MD 20892–7628, or call non-toll-free number 301–402–0846, or e-mail your request, including your address to *NIAIDsurvey@NIH.gov.*

Comments Due Date: Comments regarding this information collection are best assured of having their full effect if received within 30-days of the date of this publication.

J.J. McGowan,

Executive Officer, NIAID,National Institutes of Health.

[FR Doc. E9–29461 Filed 12–10–09; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute on Deafness and Other Communication Disorders; Notice of Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of a meeting of the National Deafness and Other Communication Disorders Advisory Council.

The meeting will be open to the public as indicated below, with attendance limited to space available. Individuals who plan to attend and need special assistance, such as sign language interpretation or other reasonable accommodations, should notify the Contact Person listed below in advance of the meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Deafness and Other Communication Disorders Advisory Council;

Date: January 22, 2010;

Closed: 8:30 a.m. to 10:30 a.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Building 31, 31 Center Drive, Conference Room 6, Bethesda, MD 20892.

Open: 10:30 a.m. to 2:30 p.m.

Agenda: Staff reports on divisional, programmatic, and special activities.

Place: National Institutes of Health, Building 31, 31 Center Drive, Conference Room 6, Bethesda, MD 20892.

Contact Person: Craig A. Jordan, PhD, Director, Division of Extramural Activities, NIDCD, NIH, Executive Plaza South, Room 400C, 6120 Executive Blvd., Bethesda, MD 20892–7180, 301–496–8693, *jordanc@nidcd.nih.gov*.

Any interested person may file written comments with the committee by forwarding the statement to the Contact Person listed on this notice. The statement should include the name, address, telephone number and when applicable, the business or professional affiliation of the interested person.

In the interest of security, NIH has instituted stringent procedures for entrance onto the NIH campus. All visitor vehicles, including taxicabs, hotel, and airport shuttles will be inspected before being allowed on campus. Visitors will be asked to show one form of identification (for example, a government-issued photo ID, driver's license, or passport) and to state the purpose of their visit.

Information is also available on the Institute's/Center's home page: *http://www.nidcd.nih.gov/about/groups/ndcdac/,* where an agenda and any additional information for the meeting will be posted when available.

(Catalogue of Federal Domestic Assistance Program Nos. 93.173, Biological Research Related to Deafness and Communicative Disorders, National Institutes of Health, HHS)

Dated: December 4, 2009.

Jennifer Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. E9–29474 Filed 12–10–09; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Mental Health; Notice of Meeting

Pursuant to section 10(a) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of an Interagency Autism Coordinating Committee (IACC) meeting.

The purpose of the IACC meeting is to discuss recommendations for the annual update of the IACC Strategic Plan for Autism Spectrum Disorders Research. The meeting will be open to the public and will be accessible by webcast and conference call.

Name of Committee: Interagency Autism Coordinating Committee (IACC).

Type of Meeting: Open Meeting.

Date: January 19, 2010.

Time: 9 a.m. to 5 p.m.* Eastern Time—* Approximate end time

Agenda: To discuss the recommendations for updating the IACC Strategic Plan for Autism Spectrum Disorder Research.

Place: The National Institutes of Health, Main Campus, William H. Natcher Conference Center, 45 Center Drive, Conference Rooms E1/E2, Bethesda, MD 20892.

Webcast Live: http://videocast.nih.gov/.

Conference Call Access: Dial: 888–577–8995, Access code: 1991506.

Cost: The meeting is free and open to the public.

Registration: http://www.acclaroresearch.com/oarc/1-19-10_IACC/ Pre-registration is recommended to expedite check-in. Seating in the meeting room is limited to room capacity and on a first come, first served basis.

Access: Metro accessible—Medical Center Metro Station.

Contact Person: Ms. Lina Perez, Office of Autism Research Coordination, National Institute of Mental Health, NIH, 6001 Executive Boulevard, Room 8200, Bethesda, MD 20892–9669, Phone: 301–443–6040, E-mail: *IACCPublicInquiries@mail.nih.gov.*

Please Note:

Any member of the public interested in presenting oral comments to the Committee must notify the Contact Person listed on this notice by 5 p.m. ET on Monday, January 11, 2010 with their request to present oral comments at the meeting. Interested individuals and representatives of organizations must submit a written/electronic copy of the oral presentation/statement including a brief description of the organization represented by 5 p.m. ET on Wednesday, January 13, 2010. Statements submitted will become a part of the public record. Only one representative of an organization will be allowed to present oral comments and presentations will be limited to three to five minutes per speaker, depending on number of speakers to be accommodated within the allotted time. Speakers will be assigned a time to speak in the order of the date and time when their request to speak is received, along with the required submission of the written/electronic statement by the specified deadline.

In addition, any interested person may submit written comments to the IACC prior to the meeting by sending the comments to the Contact Person listed on this notice by 5 p.m. ET Thursday, January 14, 2010. The comments should include the name, address, telephone number and when applicable, the business or professional affiliation of the interested person. All written statements received by the deadlines for both oral and written public comments will be provided to the IACC for their consideration and will become part of the public record.

The meeting will be open to the public through a conference call phone number and webcast live on the Internet. Members of the public who participate using the conference call phone number will be able to listen to the meeting but will not be heard. If you experience any technical problems with the webcast live or conference call, please-mail *IACCTechSupport@acclaroresearch.com.*

Individuals who participate in person or by using these electronic services and who need special assistance, such as captioning of the conference call or other reasonable accommodations, should submit a request to the Contact Person listed on this notice at least 7 days prior to the meeting.

To access the Webcast live on the Internet the following computer capabilities are required: (A) Internet Explorer 5.0 or later, Netscape Navigator 6.0 or later or Mozilla Firefox 1.0 or later; (B) Windows® 2000, XP Home, XP Pro, 2003 Server or Vista; (C) Stable 56k, cable modem, ISDN, DSL or better Internet connection; (D) Minimum of Pentium 400 with 256 MB of RAM (Recommended); (E) Java Virtual Machine enabled (Recommended).

NIH has instituted stringent security procedures for entrance onto the NIH campus. All visitors must enter through the NIH Gateway Center. This center combines visitor parking, non-commercial vehicle inspection and visitor ID processing, all in one location. The NIH will process all

visitors in vehicles or as pedestrians. You will be asked to submit to a vehicle or personal inspection and will be asked to state the purpose of your visit. Visitors over 15 years of age must provide a form of government-issued ID such as a driver's license or passport. All visitors should be prepared to have their personal belongings inspected and to go through metal detection inspection.

When driving to NIH, plan some extra time to get through the security checkpoints. Be aware that visitor parking lots on the NIH campus can fill up quickly. The NIH campus is also accessible via the metro Red Line, Medical Center Station. The Natcher Conference Center is a 5-minute walk from the Medical Center Metro Station.

Additional NIH campus visitor information is available at: *http://www.nih.gov/about/visitor/index.htm*

As a part of security procedures, attendees should be prepared to present a photo ID at the meeting registration desk during the check-in process. Pre-registration is recommended. Seating will be limited to the room capacity and seats will be on a first come, first served basis, with expedited check-in for those who are pre-registered.

Meeting schedule subject to change.

Information about the IACC is available on the Web site: *http://www.iacc.hhs.gov.*

Dated: December 7, 2009.

Jennifer Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. E9–29582 Filed 12–10–09; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Diabetes and Digestive and Kidney Diseases; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute and Digestive and Kidney Diseases Special Emphasis Panel; Diabetes and Obesity Ancillary Studies.

Date: February 18, 2010.

Time: 2 p.m. to 4 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Two Democracy Plaza, 6707 Democracy Boulevard, Bethesda, MD 20892, (Telephone Conference Call)

Contact Person: D. G. Patel, PhD, Scientific Review Officer, Review Branch, DEA, NIDDK, National Institutes of Health, Room 756, 6707 Democracy Boulevard, Bethesda, MD 20892–5452, (301) 594–7682. *pateldg@niddk.nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.847, Diabetes, Endocrinology and Metabolic Research; 93.848, Digestive Diseases and Nutrition Research; 93.849, Kidney Diseases, Urology and Hematology Research, National Institutes of Health, HHS)

Dated: December 7, 2009.

Jennifer Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. E9–29581 Filed 12–10–09; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Biomedical Imaging and Bioengineering; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The contract proposals and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the contract proposals, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Biomedical Imaging and Bioengineering Special Emphasis Panel.

Date: January 15, 2010.

Time: 10 a.m. to 12 p.m.

Agenda: To review and evaluate contract proposals.

Place: National Institutes of Health, Two Democracy Plaza, 6707 Democracy Blvd., Bethesda, MD 20892, (Virtual Meeting)

Contact Person: Ruixia Zhou, PhD, Scientific Review Officer, 6707 Democracy Boulevard, Suite 957, Bethesda, MD 20892, 301–496–4773, *zhour@mail.nih.gov.*

Dated: December 7, 2009.

Jennifer Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. E9–29580 Filed 12–10–09; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. FR–5280–N–48]

Federal Property Suitable as Facilities To Assist the Homeless

AGENCY: Office of the Assistant Secretary for Community Planning and Development, HUD.

ACTION: Notice.

SUMMARY: This Notice identifies unutilized, underutilized, excess, and surplus Federal property reviewed by HUD for suitability for possible use to assist the homeless.

DATES: *Effective Date: December 11, 2009.*

FOR FURTHER INFORMATION CONTACT: Kathy Ezzell, Department of Housing and Urban Development, 451 Seventh Street, SW., Room 7262, Washington, DC 20410; telephone (202) 708–1234; TTY number for the hearing- and speech-impaired (202) 708–2565, (these telephone numbers are not toll-free), or call the toll-free Title V information line at 800–927–7588.

SUPPLEMENTARY INFORMATION: In accordance with the December 12, 1988 court order in *National Coalition for the Homeless* v. *Veterans Administration,* No. 88–2503–OG (D.D.C.), HUD publishes a Notice, on a weekly basis, identifying unutilized, underutilized, excess and surplus Federal buildings and real property that HUD has reviewed for suitability for use to assist the homeless. Today's Notice is for the purpose of announcing that no additional properties have been determined suitable or unsuitable this week.

Dated: December 3, 2009.

Mark R. Johnston,

Deputy Assistant Secretary for Special Needs.

[FR Doc. E9–29255 Filed 12–10–09; 8:45 am]

BILLING CODE 4210–67–P

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. FR–5368–N–01]

Public Housing Mortgage Program: Notice of Web Publication

AGENCY: Office of the Assistant Secretary for Public and Indian Housing, HUD.

ACTION: Notice.

SUMMARY: Public housing a agencies (PHAs) are authorized, by statute, to mortgage their public housing real estate assets to secure financing to undertake development and rehabilitation of low-income housing with HUD approval. HUD has currently allowed PHAs to exercise this authority on a case-by-case basis. To streamline this process, HUD has posted on its Web site a proposed notice that proposes the terms and conditions by which PHAs may undertake such financing with HUD approval. HUD invites PHAs and interested members of the public to review this proposed notice and submit comments in accordance with the procedures provided in this **Federal Register** notice. HUD is seeking public comments on this proposed notice as it proceeds to formalize final guidance for the exercise of this financing authority.

DATES: *Comment Due Date:* January 31, 2010.

ADDRESSES: Interested persons are invited to submit comments regarding the public housing mortgage program notice, which can be found at: *http://www.hud.gov/offices/pih/programs/ph/capfund/phmp.cfm*, by the due date. Comments may be submitted via mail to: PHMP Comments, C/o Dominique Blom, Deputy Assistant Secretary, Office of Public Housing Investments, Room 4134, Department of Housing and Urban Development, 451 7th Street, SW., Washington, DC 20410.

Comments may also be submitted via e-mail to:
PHMP_Notice_Comments@hud.gov.

No Facsimile Comments. Facsimile (FAX) comments are not acceptable.

Public Inspection of Public Comments. All properly submitted comments and communications submitted to HUD will be available for public inspection and copying in Room 4134 at HUD Headquarters. Due to security measures at the HUD Headquarters building, an advance appointment to review the public comments must be scheduled by calling the contact person listed below. Individuals with speech or hearing impairments may access this number via TTY by calling the Federal Information Relay Service, toll-free, at 800–877–8339.

FOR FURTHER INFORMATION CONTACT: Kevin Gallagher, Capital Program Division, Office of Public and Indian Housing, Department of Housing and Urban Development, 451 7th Street, SW., Washington, DC 20410–8000; telephone number 202–402–4192 (this is not a toll-free number). Hearing- or speech-impaired individuals may access this number through TTY by calling the toll-free Federal Information Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

I. Background

Section 30 of the United States Housing Act of 1937 (1937 Act) (42 U.S.C. 1437z–2), entitled ''Public Housing Mortgages and Security Interest,'' authorizes PHAs, subject to HUD approval, to pledge or mortgage public housing projects or other property of the PHA and specifically provides as follows:

> (a) GENERAL AUTHORIZATION—The Secretary may, upon such terms and conditions as the Secretary may prescribe, authorize a public housing agency to mortgage or otherwise grant a security interest in any public housing project or other property of the public housing agency.

Since 2005, HUD has allowed PHAs to exercise this authority by entering into property mortgages to obtain financing for development and rehabilitation of dwelling units. HUD has posted, on its Web site, a proposed notice, providing more information and procedures for PHAs obtaining HUD approval to enter into such financing arrangements. This proposed notice, upon which HUD invites comment, is available at *http://www.hud.gov/offices/pih/programs/ph/capfund/phmp.cfm.* HUD seeks comments on any issues raised by this proposed notice, and particularly on the provisions regarding precedence of security interests for dwelling and non-dwelling units.

As will be seen upon review of this proposed notice, HUD proposes to consider allowing lenders to take a first lien position on public housing non-dwelling property, allowing them, if necessary, to foreclose on the property and extinguish any HUD interest. HUD believes that this approach for non-dwelling units will incentivize private market participation. For dwelling units, a declaration of restrictive covenants will constitute first lien position, and, while the property can be foreclosed upon, the property will be required to continue to be operated in accordance with public housing requirements, including eligibility restrictions. While HUD is implementing the Public Housing Mortgage program on a case-by-case basis, proposals for transactions in which HUD permits potential foreclosure on dwelling units, without further HUD review of the foreclosure action, will receive additional scrutiny and a higher level of review as HUD has not approved transactions utilizing this aspect of the program and is mindful the risks involved.

While HUD seeks comments on any issues raised by this notice, HUD is particularly interested in the provisions regarding precedence of security interests for dwelling and non-dwelling units.

Dated: December 4, 2009.

Deborah Hernandez,

General Deputy Assistant Secretary for Public and Indian Housing.

[FR Doc. E9–29532 Filed 12–10–09; 8:45 am]

BILLING CODE 4210–67–P

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. FR–5373–N–01]

Notice of Sale of HUD-Held Multifamily and Healthcare Loans

AGENCY: Office of the Assistant Secretary for Housing—Federal Housing Commissioner, HUD.

ACTION: Notice of sale of Secretary-held mortgage loans.

SUMMARY: This notice announces HUD's intention to sell certain unsubsidized Healthcare and unsubsidized Multifamily mortgage loans, without Federal Housing Administration (FHA) insurance, through several different sales activities. This notice also generally describes the process for bidding on loans and defines certain persons who are eligible and ineligible to bid. The sales activities announced by today's **Federal Register** Notice include direct sales of Multifamily notes to units of local government, a competitive sale of Healthcare notes on December 16th and a competitive sale of Multifamily notes that will be scheduled for a later date.

DATES: The sales of the direct loans to units of local government will close by December 16, 2009. The Bidder's Information Package (BIP) for the competitive sale of the Healthcare notes was made available to qualified bidders on or about November 20, 2009. Bids for Healthcare loans must be submitted on the bid date, which is currently scheduled for December 16, 2009. HUD anticipates that awards of the

Healthcare loans will be made by December 17, 2009. Closings for the Healthcare loans are expected to take place between December 21, 2009 and December 22, 2009. Dates for the competitive Multifamily loan sale are pending.

ADDRESSES: To become a qualified bidder and receive the BIP, prospective bidders must complete, execute, and submit a Confidentiality Agreement and a Qualification Statement acceptable to HUD. Both documents will be available on the HUD Web site at *http://www.hud.gov/offices/hsg/comp/asset/mfam/mhls.cfm*. Please mail and fax executed documents to KDX Ventures: KDX Ventures, c/o The Debt Exchange, 133 Federal Street, 10th Floor, Boston, MA 02111, Attention: Loan Sale Coordinator, Fax: 1–617–531–3499.

FOR FURTHER INFORMATION CONTACT: John Lucey, Deputy Director, Asset Sales Office, Department of Housing and Urban Development, 451 Seventh Street, SW., Room 3136, Washington, DC 20410–8000; telephone 202–708–2625, extension 3927. Hearing- or speech-impaired individuals may call 202–708–4594 (TTY). These are not toll-free numbers.

SUPPLEMENTARY INFORMATION: HUD announces its intention to sell certain unsubsidized mortgage loans (Mortgage Loans) secured by Multifamily and Healthcare properties located throughout the United States. The Mortgage Loans are comprised primarily of non-performing mortgage loans. A listing of the loans to be sold directly to units of local government will be provided upon request. A final listing of the Mortgage Loans for the competitive Healthcare sale will be included in the BIP. The Mortgage Loans will be sold without FHA insurance and with servicing released. HUD will offer qualified bidders an opportunity to bid competitively on the Mortgage Loans.

For the future Multifamily note sale, the Mortgage Loans will be stratified for bidding purposes into several mortgage loan pools, including pool(s) only offered to not-for-profit organizations and units of State and Local Government. Each pool will contain Mortgage Loans that generally have similar performance, property type, geographic location, lien position and other characteristics. Qualified bidders may submit bids on one or more pools of Mortgage Loans or may bid on individual loans.

For both the Healthcare and the Multifamily competitive sales, a mortgagor who is a qualified bidder may submit an individual bid on its own Mortgage Loan. Interested Mortgagors should review the Qualification Statement to determine whether they may be eligible to qualify to submit bids.

The Bidding Process: The BIP will describe in detail the procedure for bidding in the competitive Healthcare loan sale. The BIP will also include a standardized non-negotiable loan sale agreement (Loan Sale Agreement). For the competitive Healthcare loan sale, bids will be accepted on December 16th. Bidders are required to wire a deposit for their loan bids, prior to the close of bidding. Deposits are calculated based upon each bidder's aggregate bid price. For an aggregate bid price greater than or equal to one hundred thousand dollars ($100,000), each bidder must submit a deposit equal to the greater of: (a) One hundred thousand dollars ($100,000); or (b) ten percent (10%) of its bid price. In the event the bidder's aggregate bid price is less than $100,000, the minimum deposit shall not be less than fifty percent (50%) of its bid price.

HUD will evaluate the bids submitted and determine the successful bids, in terms of the best value to HUD, in its sole and absolute discretion.

If a bidder is successful, the bidder's deposit will be non-refundable and will be applied toward the purchase price. Deposits will be returned to unsuccessful bidders. Closings are expected to take place between December 21, 2009 and December 22, 2009. A similar format will be used for the future Multifamily loan sale.

These are the essential terms of sale. The Loan Sale Agreement, which will be included in the BIP, will contain additional terms and details. To ensure a competitive bidding process, the terms of the bidding process and the Loan Sale Agreement are not subject to negotiation.

Due Diligence Review: The BIP will describe the due diligence process for reviewing loan files in the competitive Healthcare loan sale. Qualified Bidders will be able to access loan information remotely via a high-speed Internet connection. Further information on performing due diligence review of the Mortgage Loans will be provided in the BIP.

Mortgage Loan Sale Policy: HUD reserves the right to add Mortgage Loans to or delete Mortgage Loans from the competitive Healthcare loan sale at any time prior to the Award Date. HUD also reserves the right to reject any and all bids, in whole or in part, without prejudice to HUD's right to include any Mortgage Loans in a later sale. Mortgage Loans will not be withdrawn after the Award Date except as is specifically provided in the Loan Sale Agreement.

The sale activities described in this announcement involve sales of unsubsidized mortgage loans, pursuant to Section 204(a) of the Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act of 1997, 12 U.S. C. 1715z–11a(a).

Mortgage Loan Sale Procedures: HUD will pursue direct noncompetitive sales as the method to sell some of the Multifamily Mortgage Loans to units of local government. This method of sale will ensure affordable housing by awarding the Mortgage Loans to units of State and Local Government. The final purchase price will be based on the Office of Management and Budget's approved market valuation methodology and, if applicable, adjusted by immediate repairs required to maintain the property. The itemized cost of immediate repairs shall adhere to HUD's Post-Closing Repair Requirements form HUD–9552.

HUD selected a competitive sale as the method to sell the Healthcare and other Multifamily Mortgage Loans. This method of sale maximizes HUD's return on the sale of these Mortgage Loans, allows for the greatest opportunity for all qualified bidders to bid on the Mortgage Loans, and provides the quickest and most efficient vehicle for HUD to dispose of the Mortgage Loans.

Bidder Eligibilty: In order to bid in the sale, a prospective bidder must complete, execute and submit both a Confidentiality Agreement and a Qualification Statement acceptable to HUD. Not-for-profit organizations and units of State and Local Government must complete, execute and submit both a Confidentiality Agreement and Qualification Statement for Non-Profits, Units of General Local Government and State Agencies acceptable to HUD. The following individuals and entities are ineligible to bid on any of the Mortgage Loans:

(1) Any employee of HUD, a member of such employee's household, or an entity owned or controlled by any such employee or member of such an employee's household;

(2) Any individual or entity that is debarred, suspended, or excluded from doing business with HUD pursuant to Title 24 of the Code of Federal Regulations, Part 24;

(3) Any contractor, subcontractor and/or consultant or advisor (including any agent, employee, partner, director, principal or affiliate of any of the foregoing) who performed services for or on behalf of HUD in connection with HUD mortgage sales;

(4) Any individual who was a principal, partner, director, agent or employee of any entity or individual described in subparagraph 3 above, at any time during which the entity or individual performed services for or on behalf of HUD in connection with HUD mortgage sales;

(5) Any individual or entity that uses the services, directly or indirectly, of any person or entity ineligible under subparagraphs 1 through 4 above to assist in preparing any of its bids on the Mortgage Loans;

(6) Any individual or entity which employs or uses the services of an employee of HUD (other than in such employee's official capacity) who is involved in HUD mortgage sales;

(7) Any mortgagor (or affiliate of a mortgagor) that failed to submit to HUD on or before December 1, 2009, audited financial statements for fiscal years 2001 through 2008 for a project securing a Mortgage Loan;

(8) Any individual or entity and any Related Party (as such term is defined in the Qualification Statement) of such individual or entity that is a mortgagor in any of HUD's Multifamily Housing or Healthcare programs that is in default under such mortgage loan or is in violation of any regulatory or business agreements with HUD, unless such default or violation is cured on or before December 8, 2009;

(9) Any entity or individual that serviced or held any Mortgage Loan at any time during the 2-year period prior to December 1, 2009, is ineligible to bid on such Mortgage Loan or on the pool containing such Mortgage Loan, but may bid on loan pools that do not contain Mortgage Loans that they have serviced or held at any time during the 2-year period prior to December 1, 2009.

(10) Also ineligible to bid on any Mortgage Loan are: (a) Any affiliate or principal of any entity or individual described in the preceding sentence (paragraph 9); (b) any employee or subcontractor of such entity or individual during that 2-year period; or (c) any entity or individual that employs or uses the services of any other entity or individual described in this paragraph in preparing its bid on such Mortgage Loan.

In addition, to be eligible to bid in HUD's supplementary pool of unsubsidized Multifamily mortgage loans limited to not-for-profit organizations and units of State and Local Government, a prospective bidder must qualify as one or more of the following:

(1) An entity that is a nonprofit as defined by Section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C.A. § 501(c)(3)); and/or

(2) an entity that is a unit of general local government or State agency. Prospective bidders should carefully review the Qualification Statement to determine whether they are eligible to submit bids on the Mortgage Loans.

Freedom of Information Act Requests: HUD reserves the right, in its sole and absolute discretion, to disclose information regarding these sales activities, including, but not limited to, the identity of any successful bidder and its bid price or bid percentage for any pool of loans or individual loan, upon the closing of the sale of all the Mortgage Loans. Even if HUD elects not to publicly disclose any information relating to these sales activities, HUD will have the right to disclose any information that HUD is obligated to disclose pursuant to the Freedom of Information Act and all regulations promulgated there under.

Scope of Notice: This notice applies to these sales activities and does not establish HUD's policy for the sale of other mortgage loans.

Dated: November 30, 2009.

David H. Stevens,

Assistant Secretary for Housing—Federal Housing Commissioner.

[FR Doc. E9–29531 Filed 12–10–09; 8:45 am]

BILLING CODE 4210–67–P

DEPARTMENT OF THE INTERIOR

Bureau of Reclamation

[INT–DES 09–56]

Minidoka Dam Spillway Replacement Minidoka County, ID

AGENCY: Bureau of Reclamation, Interior.

ACTION: Notice of Availability and Public Meetings on the Draft Environmental Impact Statement for Minidoka Dam Spillway Replacement.

SUMMARY: Pursuant to section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969, as amended, the Bureau of Reclamation (Reclamation) has prepared a Draft Environmental Impact Statement (DEIS) on the proposed Minidoka Dam Spillway Replacement. Alternatives considered in the DEIS are the No Action, as required under NEPA; total replacement of the spillway and headgate structures; and replacement of just the spillway. The U.S. Fish and Wildlife Service is a cooperating agency under NEPA.

DATES: Public meetings with an opportunity to provide oral comments will be held on the following dates and times:

- Idaho Falls, ID: January 12, 2010: 7 p.m. to 9 p.m.
- Pocatello, ID: January 13, 2010: 7 p.m. to 9 p.m.
- Burley, ID: January 14, 2010: 7 p.m. to 9 p.m.

Written comments will be accepted through February 5, 2010. Please direct requests for sign language interpretation for the hearing impaired or other auxiliary aids, to Ms. Allyn Meuleman by December 28, 2009, at the telephone or fax numbers listed under the **FOR FURTHER INFORMATION CONTACT** section of this notice.

ADDRESSES: Comments and requests to be added to the mailing list may be submitted to Bureau of Reclamation, Snake River Area Office, Attention: Allyn Meuleman, Activity Manager, 230 Collins Road, Boise, ID 83702–4520. Comments may also be submitted electronically to *minidoka_dam_eis@usbr.gov.*

The public meetings will be held at the following locations which are physically accessible to people with disabilities.

- Red Lion Inn, 475 River Parkway, Idaho Falls, ID 83402.
- Cotton Tree Inn, 1415 Bench Road, Pocatello, ID 83201.
- Fairfield Inn, 230 West 7th Street North, Burley, ID 83318.

FOR FURTHER INFORMATION CONTACT: Contact Allyn Meuleman, (208) 383–2258, *fax:* (208) 383–2237. Information on this project can also be found at: *http://www.usbr.gov/pn/programs/eis/minidokadam/index.html.*

SUPPLEMENTARY INFORMATION: Minidoka Dam impounds Lake Walcott and is a feature of Reclamation's Minidoka Project. They are located on the main stem Snake River about 18 miles northeast from the city of Burley, ID within the Minidoka Wildlife Refuge. After over 103 years of continued use, the over 2000 feet long concrete spillway at the Minidoka Dam has reached the end of its functional lifespan. The concrete that forms the spillway crest and the piers of the pier-and-stoplog structure shows extensive visible deterioration at numerous locations. In addition, the potential for ice damage to the stoplog piers requires that reservoir water levels be dropped each winter. The headgate structures at the North Side Canal and South Side Canal also show serious concrete deterioration similar to that seen along the spillway. The current conditions of the Minidoka Dam spillway and headgate structures present increasingly difficult reliability and maintenance

problems. If structural problems are not corrected there is potential of partial or complete failure of the spillway and headgates. If these failures occur, Reclamation may not be able to meet contractual obligations for water delivery, power generation and Reclamation's commitments to deliver flow augmentation water under the Nez Perce Settlement Agreement and the Endangered Species Act.

Public Involvement

Reclamation will conduct public meetings to solicit input on the DEIS. If you wish to comment, you may provide your comments as indicated under the **ADDRESSES** section. Before including your name, address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment (including your personal identifying information) may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

J. William McDonald,

Regional Director, Pacific Northwest Region.

[FR Doc. E9–29605 Filed 12–10–09; 8:45 am]

BILLING CODE 4310–MN–P

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

No Child Left Behind Act of 2001—Membership of the School Facilities and Construction Negotiated Rulemaking Committee

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Notice.

SUMMARY: As required by the No Child Left Behind Act of 2001, and in compliance with procedures set out in the Negotiated Rulemaking Act, the Secretary of the Interior has appointed members of the committee to prepare and submit a report or reports regarding Bureau-funded school facilities. The Secretary chose from nominations submitted by Indian tribes and others whose students attend Bureau-funded schools (operated either by the Bureau, or by a tribe through a contract or grant). To the maximum extent possible, the proportional representation of tribes on the committee reflects the proportionate share of students from tribes served by the Bureau-funded school facilities. In addition, the Secretary considered the balance of representation with regard to geographical location, size, and type of school and facility, as well as the interests of parents, teachers, administrators, and school board members, in selecting tribal committee representatives. Having considered all nominations, the Secretary appoints the persons named in this notice as committee members.

DATES: Comments must be postmarked or faxed no later than January 11, 2010. For the dates of the first committee meeting, please see the information under the ''First Committee Meeting'' heading in this notice.

ADDRESSES: Send comments to the Designated Federal Official: Michele F. Singer, Director, Office of Regulatory Affairs & Collaborative Action, Office of the Assistant Secretary—Indian Affairs, 1001 Indian School Road, NW., Suite 312, Albuquerque, NM 87104. Or fax to (505) 563–3811. For the location of the first committee meeting, please see the information under the ''First Committee Meeting'' heading in this notice.

FOR FURTHER INFORMATION CONTACT: Michele F. Singer, Designated Federal Official. Telephone: (505) 563–3805. Fax: (505) 563–3811.

SUPPLEMENTARY INFORMATION:

Background

The No Child Left Behind Act of 2001 (Pub. L. 107–110), which is codified at 25 U.S.C. 2001 *et seq.,* requires the Secretary to establish a negotiated rulemaking committee to issue a report or reports to the Secretary relating to specific areas of Indian education (*see* 25 U.S.C. 2018). The Secretary must follow the procedures of negotiated rulemaking under the Negotiated Rulemaking Act (5 U.S.C. 561 *et seq.*) in a manner that:

(1) Reflects the unique government-to-government relationship between Indian tribes and the United States;

(2) Ensures that the membership of the committee includes only representatives of the Federal Government and of tribes served by Bureau-funded schools;

(3) Ensures, to the maximum extent possible, that the tribal representative membership on the committee reflects the proportionate share of students from tribes served by the Bureau-funded school system; and

(4) Complies with the Federal Advisory Committee Act (5 U.S.C. Appx. 1 *et seq.*).

In the fall of 2006, the Department sought assistance with this effort from the U.S. Institute for Environmental Conflict Resolution (U.S. Institute). The U.S. Institute conducted a convening assessment and contracted with an independent, impartial convening team, the Consensus Building Institute (CBI), to carry out interviews and prepare a draft convening report. The topics covered in CBI's interviews were: Methods used to catalog school facilities, formulas for prioritizing and funding school replacement construction and new construction, and formulas for prioritizing and funding school renovation and repair. The convening team conducted confidential interviews with tribal officials or their designees, representatives of Bureau-operated or tribally controlled schools, and others with an interest in Bureau-funded school facilities construction. The team also conducted two focus group sessions. Altogether, the team spoke with 198 individuals, representing some 99 different schools. In its final report, CBI provided recommendations to assign committee seats according to the Congressional mandate for proportionality using student enrollment figures from 2006 and also suggested that seats be allocated to other tribes and tribal entities to maximize representation. The Final Convening Report prepared by CBI was released on March 5, 2008, and can be accessed at *http://www.ecr.gov/pdf/BIA_FinalConvRpt200803.pdf.*

The proposed school facilities negotiated rulemaking committee will prepare and submit to the Secretary of the Interior the following:

(1) A catalog of school facilities that includes the components required by 25 U.S.C. 2005(a)(5)(A)(i)(I)–(V);

(2) A report that determines the school replacement and new construction needs of the interested parties, and a formula for the equitable distribution of funds to address those needs, based on the requirements of 25 U.S.C. 2005(a)(5)(A)(ii);

(3) A report that determines the major and minor renovation needs of the interested parties, and a formula for the equitable distribution of funds to address these needs, based on the requirements of 25 U.S.C. 2005(a)(5)(A)(iii); and

(4) Proposed revisions to the national facilities standards for home-living (dormitory) situations, based on the requirements of 25 U.S.C. 2002(a)(1).

Selection of Committee Members

On October 22, 2008, the Secretary published a request for nominations (73 FR 63008) and, on January 6, 2009, extended the deadline for submitting requests for nominations to January 23, 2009 (74 FR 454). The Secretary received 50 nominations. The Secretary has determined that the proper functioning of the committee requires

that the committee be limited to 30 members, as allowed by the Negotiated Rulemaking Act (5 U.S.C. 565).

The Secretary finds that the membership of the committee:

(1) Represents interests that will be significantly affected by the final report (*i.e.,* parents; teachers; school board members; and administrators of Bureau-funded school facilities);

(2) Proportionately represents students from tribes served by Bureau-funded school facilities;

(3) Represents, to the extent possible in a committee of limited size, the diverse sizes, types, and locations of Bureau-funded education facilities; and

(4) Has been selected using a process that considers the nominees' knowledge of school facilities and their repair, renovation and construction; experience with past or present school construction; and relevant skills and abilities.

Appointed Tribal Committee Members

The Secretary appoints the following tribal representatives for the school facilities and construction negotiated rulemaking committee:

Nominee	Tribal affiliation	School facility affiliation
Gregory Anderson	Muscogee (Creek) Nation of Oklahoma	Superintendent, Creek Nation—Eufaula Dormitory.
Janice Azure	Turtle Mountain Band of Chippewa	Councilwoman, Turtle Mountain Band of Chippewa.
Jimmy C. Begay	Navajo Nation	President, Navajo Nation Board of Diné Education.
Gerald Leroy "Jerry" Brown	Confederated Salish and Kootenai Tribe	Chairman, Two Eagle River School Board.
Fred Colhoff	Oglala Sioux Tribe	Facilities Manager, Wounded Knee District School.
Joy Culbreath	Choctaw Nation of Oklahoma	Executive Education Director, Choctaw Nation of Oklahoma.
Judy DeHose	White Mountain Apache Tribe	Executive Assistant—District 1, White Mountain Apache Tribe.
Shirley Gross	15 Tribes from North Dakota, South Dakota, and Nebraska.	Program Coordinator, Pierre Indian Learning Center.
James Hogan	Rosebud Sioux Tribe	School Expansion Liaison, Rosebud Sioux Tribe.
Lester B. Hudson	Navajo Nation	Chief, Executive Officer, Ch'ooshgai Community School.
Frank E. Lujan	Pueblo of Isleta	Lieutenant Governor, Pueblo of Isleta—Tribal Government.
Merrie Miller White Bull	Cheyenne River Sioux Tribe	Tribal Council, Cheyenne River Sioux Tribe.
Betty Ojaye	Navajo Nation	Executive Director, Navajo Preparatory School Inc.
Alfred P. Redman Sr.	Northern Arapaho Tribe	Tribal Education Director, Northern Arapaho Tribe.
Charles M. Roessel	Navajo Nation	Superintendent, Rough Rock Community School.
Andrew M. Tah	Navajo Nation	Superintendent of Schools, Division of Diné Education.
Arthur M. Taylor Jr.	Nez Perce Tribe	Native American Tribal Liaison, University of Idaho.
Jerome Wayne Witt	Oglala Sioux Tribe	Facility Assistant, Loneman School Corporation.
Albert A. Yazzie	Navajo Nation	Educational Consultant, Eastern Navajo.
Dr. Kennith H. York	Mississippi Band of Choctaw Indians	Director, Planning, Mississippi Band of Choctaw Indians.
Lorena Zah Bahe	Navajo Nation	Program Director, Navajo Nation Office of Monitoring, Evaluation and Technical Assistance.
Catherine M. Wright	Hopi Tribe	Director, Hopi Board of Education.

The Secretary appoints the following alternate tribal representatives for the school facilities and construction negotiated rulemaking committee:

Nominee	Tribal affiliation	School facility affiliation
Nancy R. Martine-Alonzo	Navajo Nation	Assistant Secretary of Education for Indian Education, New Mexico Public Education Department.
Margie R.S. Begay	Navajo Nation	President, Lukachukai Community Board of Education.
Faye Blueeyes	Navajo Nation	Program Director, Dzilth-Na-O–Dith-Hle Community Grant School.
Kim R. Clausen-Jensen	Oglala Sioux Tribe	Director, Office of Environmental Protection.
Jerald Scott House	Navajo Nation	Program Manager, Design & Engineering/HUD.
Bryce In The Woods	Cheyenne River Sioux Tribe	Council Representative, Cheyenne River Sioux Tribe.
Fred Leader Charge	Rosebud Sioux Tribe	Operation and Maintenance Coordinator, Rosebud Sioux Tribe.
Alan R. Lovesee	Choctaw Nation of Oklahoma	Director of Congressional Relations, Choctaw Nation of Oklahoma.
Willie Tracey Jr.	Navajo Nation	Council Delegate-Education Committee, Navajo Nation Council.

Appointed Federal Committee Members

The Secretary appoints the following Federal representatives for the school facilities and construction negotiated rulemaking committee:

Name	Affiliation
Michele F. Singer	Designated Federal Official, Office of the Assistant Secretary-Indian Affairs.
John Rever	Director, Facilities, Environmental and Cultural Resources.
David Talayumptewa	Assistant Deputy Director for Administration, Bureau of Indian Education.
James W. Porter	Attorney-Advisor, Office of the Solicitor.

The Secretary expects to name a fifth member to the team of Federal representatives. That member has not been identified, but will probably be a representative of a senior Departmental Official, such as the Assistant Secretary-Indian Affairs, of the Secretary of the Interior.

The Secretary appoints the following alternate Federal representatives for the school facilities and construction negotiated rulemaking committee:

Name	Affiliation
Regina Gilbert	Regulatory Policy Specialist, Office of Regulatory Affairs & Collaborative Action.
Emerson Eskeets	Deputy Director, Bureau of Indian Affairs, Office of Facilities Management and Construction.
Jackie Cheek	Special Assistant to the Director, Bureau of Indian Education.
Brenda Riel	Attorney-Advisor, Office of the Solicitor, Division of Indian Affairs.

First Committee Meeting

The first meeting of the committee is scheduled for January 5–7, 2010. The meeting will begin at 8:30 a.m. (MST) on Tuesday, January 5 and end at 5 p.m. (MST) on Thursday, January 7, 2010. The meeting will be held at the National Indian Program Training Center, 1011 Indian School Road, NW., second floor, Albuquerque, New Mexico 87104.

Invitation To Comment

If you are a tribe with Bureau-funded schools, a regional tribal association, a regional or national Indian education organization, or an interested individual, we invite you to comment on the appointments in this notice. While the comment period briefly overlaps with the first meeting, we will nevertheless consider each and every comment received prior to the date listed in the **DATES** section.

We will consider only comments that we receive by the close of business on the date listed in the **DATES** section, at the location indicated in the **ADDRESSES** section. Comments received will be available for inspection at the address listed above from 8 a.m. to 4 p.m., Monday through Friday, except Federal holidays. Before including your address, phone number, e-mail address or other personal identifying information in your comment, please note that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Dated: December 8, 2009.

Ken Salazar,

Secretary of the Interior.

[FR Doc. E9–29674 Filed 12–10–09; 8:45 am]

BILLING CODE 4310–W7–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–R4–R–2009–N122; 40136–1265–0000–S3]

Tensas River National Wildlife Refuge, Franklin, Madison, and Tensas Parishes, LA

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of availability: final comprehensive conservation plan and finding of no significant impact.

SUMMARY: We, the Fish and Wildlife Service (Service), announce the availability of our final comprehensive conservation plan (CCP) and finding of no significant impact (FONSI) for the environmental assessment for Tensas River National Wildlife Refuge (NWR). In the final CCP, we describe how we will manage this refuge for the next 15 years.

ADDRESSES: You may obtain a copy of the CCP by writing to: Ms. Kelly Purkey, Tensas River National Wildlife Refuge, 2312 Quebec Road, Tallulah, LA 71282. You may also access and download the document from the Service's Web site: *http://southeast.fws.gov/planning.*

FOR FURTHER INFORMATION CONTACT: Ms. Kelly Purkey; telephone: 318/574–2664; fax: 318/574–1624; e-mail: *kelly_purkey@fws.gov.*

SUPPLEMENTARY INFORMATION

Introduction

With this notice, we finalize the CCP process for Tensas River NWR. We started this process through a notice in the **Federal Register** on September 8, 2006 (71 FR 53131). For more about the process, see that notice.

Tensas River NWR consists of 74,622 acres in fee title and 195 acres in easement. It is located in the Tensas River Basin in northeast Louisiana, approximately 60 miles southeast of Monroe, Louisiana, and 25 miles southwest of Vicksburg, Mississippi. The refuge area encompasses portions of Madison, Tensas, and Franklin Parishes. The office/visitor center and maintenance facilities on the refuge are approximately 12 miles southwest of Tallulah, Louisiana.

In an effort to conserve the largest privately owned tract of bottomland hardwoods remaining in the Mississippi Delta, Congress authorized the Secretary of the Interior to establish the Tensas River NWR by Public Law 96–285 on June 28, 1980. Tensas River NWR was established for various purposes, including:

''For the preservation and development of the environmental resources * * * to conserve the diversity of fish and wildlife and their habitat * * * for the conservation and development of wildlife and natural resources, the development of outdoor recreation opportunities, and interpretative education,'' and ''to give special consideration to management of the timber on the refuge to ensure continued commercial production and harvest compatible with the purposes for which the refuge is established and the needs of fish and wildlife which depend upon the dynamic and diversified hardwood forest'' (94 Stat. 595, dated June 28, 1980);

''For the development, advancement, management, conservation, and protection of fish and wildlife resources'' [16 U.S.C. 742f(a)(4)] ''for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude'' [16 U.S.C. 742f(b)(1) (Fish and Wildlife Act of 1956)];

''For conservation purposes'' [7 U.S.C. 2002 (Consolidated Farm and Rural Development Act)];

''To conserve (A) fish or wildlife which are listed as endangered species or threatened species * * * or (B) plants'' [16 U.S.C. 1534 (Endangered Species Act of 1973)].

We announce our decision and the availability of the final CCP and FONSI for Tensas River NWR in accordance with the National Environmental Policy Act (NEPA) [40 CFR 1506.6(b)] requirements. We completed a thorough

analysis of impacts on the human environment, which we included in the draft comprehensive conservation plan and environmental assessment (Draft CCP/EA). The CCP will guide us in managing and administering Tensas River NWR for the next 15 years. Alternative C is the foundation for the CCP.

The compatibility determinations for wildlife observation and photography, environmental education and interpretation, fishing, field trials, boating, bottomland hardwood forest management, trapping, all-terrain vehicle use, cooperative farming, research studies, horse/mule special use, and fire management are available in the CCP.

Background

The National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd–668ee) (Administration Act), as amended by the National Wildlife Refuge System Improvement Act of 1997, requires us to develop a CCP for each national wildlife refuge. The purpose for developing a CCP is to provide refuge managers with a 15-year plan for achieving refuge purposes and contributing toward the mission of the National Wildlife Refuge System, consistent with sound principles of fish and wildlife management, conservation, legal mandates, and our policies. In addition to outlining broad management direction on conserving wildlife and their habitats, CCPs identify wildlife-dependent recreational opportunities available to the public, including opportunities for hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation. We will review and update the CCP at least every 15 years in accordance with the Administration Act.

Comments

Approximately 200 copies of the Draft CCP/EA were made available for a 30-day public review period as announced in the **Federal Register** on February 4, 2009 (74 FR 6053). Ten respondents, consisting of the Service, the Louisiana Department of Wildlife and Fisheries, the Louisiana Department of Environmental Quality, and local citizens, submitted written comments by mail or e-mail.

Selected Alternative

After considering the comments we received, and based on the professional judgment of the planning team, we selected Alternative C to implement the CCP. The primary focus of the CCP is to optimize the biological potential of historical habitats by utilizing management actions which emphasize natural ecological processes to foster habitat functions and wildlife populations. We will enhance the biological program by inventorying and monitoring so that adaptive management can be implemented primarily for migratory birds, but other species of wildlife will benefit as well.

We will manage bottomland hardwood forests based on an inventory that defines current conditions and that can be conducted in a logical and feasible manner. Bottomlands will be managed to increase opening of the canopy cover and to increase structural and vegetation diversity. Water control structures and pumping capability will be improved to enhance moist-soil and cropland management for the benefit of wintering waterfowl. Invasive species of plants will be mapped and protocols for control will be established with the addition of a forester. Partnerships will continue to be fostered for several biological programs, hunting regulations, law enforcement issues, and research projects.

Forest management, reforestation, and resource protection at Tensas River NWR will be intensified. We will provide a full-time law enforcement officer, an equipment operator, a maintenance mechanic, and a wildlife technician. We will develop and begin to implement a Cultural Resources Management Plan.

Within 3 years, we will develop a Visitor Services Plan to be used in expanding public use facilities and opportunities on the refuge. This step-down management plan will provide overall long-term direction and guidance in developing and running a larger public use program on the refuge. We will increase opportunities for visitors by improving and/or adding facilities, such as photo blinds, observation sites, and trails, as well as improving access and roads.

The CCP will increase bottomland hardwood forest habitat restoration and management, improve general refuge and visitor center access, meet the recovery goals of the threatened Louisiana black bear, integrate management with regional watershed/ecosystem plans, improve resident and migratory wildlife species quality and abundance, and improve opportunities for wildlife-dependent public use.

Authority

This notice is published under the authority of the National Wildlife Refuge System Improvement Act of 1997, Public Law 105–57.

Dated: July 20, 2009.

Cynthia K. Dohner,

Acting Regional Director.

[FR Doc. E9–29530 Filed 12–10–09; 8:45 am]

BILLING CODE 4310–55–P

INTERNATIONAL TRADE COMMISSION

[Inv. No. 332–510]

Small and Medium-Sized Enterprises: Characteristics and Performance

AGENCY: United States International Trade Commission.

ACTION: Institution of investigation and scheduling of hearing.

SUMMARY: Following receipt of a request on October 6, 2009, from the United States Trade Representative (USTR) under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)), the Commission instituted investigation No. 332–510, *Small and Medium-Sized Enterprises: Characteristics and Performance,* to prepare the third in a series of three reports requested by the USTR relating to small and medium-sized enterprises.

DATES: January 26, 2010: Deadline for filing requests to appear at the public hearing.

January 28, 2010: Deadline for filing pre-hearing briefs and statements.

February 9, 2010: Public hearing (Washington, DC).

February 23, 2010: Deadline for filing post-hearing briefs and statements.

May 28, 2010: Deadline for filing written submissions.

October 6, 2010: Transmittal of Commission report to the USTR.

ADDRESSES: All Commission offices, including the Commission's hearing rooms, are located in the United States International Trade Commission Building, 500 E Street, SW., Washington, DC. All written submissions should be addressed to the Secretary, United States International Trade Commission, 500 E Street, SW., Washington, DC 20436. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *http://www.usitc.gov/secretary/edis.htm.*

FOR FURTHER INFORMATION CONTACT: Project Leaders Laura Bloodgood (202–708–4726 or *laura.bloodgood@usitc.gov*) or William Deese (202–205–2626 or *william.deese@usitc.gov*) for information specific to this investigation. For information on the legal aspects of this investigation, contact William Gearhart of the Commission's Office of the General

Counsel (202–205–3091 or *william.gearhart@usitc.gov*). The media should contact Margaret O'Laughlin, Office of External Relations (202–205–1819 or *margaret.olaughlin@usitc.gov).* Hearing-impaired individuals may obtain information on this matter by contacting the Commission's TDD terminal at 202–205–1810. General information concerning the Commission may also be obtained by accessing its Internet server (*http://www.usitc.gov*). Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202–205–2000.

Background: In his letter the USTR requested, under the authority of section 332(g) of the Tariff Act of 1930, that the Commission provide three reports during the next 12 months relating to small and medium-sized enterprises (SMEs). In this notice the Commission is instituting the third of three investigations under section 332(g) for the purpose of preparing the third report, which is to be transmitted to the USTR by October 6, 2010. The Commission published notices of institution of the first investigation, investigation No. 332–508, in the **Federal Register** of October 28, 2009 (74 FR 55581) and the second investigation, investigation No. 332–509, in the **Federal Register** of December 1, 2009 (74 FR 62812).

As requested, in the third report the Commission will, to the extent possible:

1. Examine U.S. SMEs engaged in providing services, including the characteristics of firms that produce tradable services, the growth in these services exports, and the differences between SME and large services exporters;

2. Identify how data gaps might be overcome to further enhance our understanding of SMEs in services sector exports;

3. For both goods and services exports, identify trade barriers (nontariff barriers and tariffs) that may disproportionately affect SME export performance, as well as possible linkages between exporting and SME performance; and

4. Provide insights on the degree to which SMEs operate as multinationals, as affiliate firms, or as contributors of indirect exports to international trade through sales to larger exporting firms.

The USTR requested that the Commission deliver the second report by October 6, 2010.

Public Hearing: The Commission will hold a joint public hearing in connection with this investigation and investigation No. 332–509 at the U.S. International Trade Commission Building, 500 E Street, SW., Washington, DC, beginning at 9:30 a.m. on Tuesday, February 9, 2010 (and continuing on February 10, 2010, if needed). Requests to appear at the public hearing should be filed with the Secretary no later than 5:15 p.m., January 26, 2010, in accordance with the requirements in the ''Submissions'' section below. Persons wishing to appear should indicate in their request to appear whether they plan to provide testimony with respect to investigation No. 332–509, investigation No. 332–510, or both investigations. All pre-hearing briefs and statements should be filed not later than 5:15 p.m., January 28, 2010; and all post-hearing briefs and statements responding to matters raised at the hearing should be filed not later than 5:15 p.m., February 23, 2010. In the event that, as of the close of business on January 26, 2010, no witnesses are scheduled to appear at the hearing, the hearing will be canceled. Any person interested in attending the hearing as an observer or non-participant may call the Office of the Secretary (202–205–2000) after January 26, 2010, for information concerning whether the hearing will be held. The Commission is also considering holding additional hearings in Portland, Oregon and St. Louis, Missouri. Notice of the time, date, and place of those hearings will be published at a later date.

Written Submissions: In lieu of or in addition to participating in the hearing, interested parties are invited to file written submissions concerning this investigation. All written submissions should be addressed to the Secretary, and all such submissions (other than pre- and post-hearing briefs and statements) should be received not later than 5:15 p.m., May 28, 2010. All written submissions must conform with the provisions of section 201.8 of the Commission's Rules of Practice and Procedure (19 CFR 201.8). Section 201.8 requires that a signed original (or a copy so designated) and fourteen (14) copies of each document be filed. In the event that confidential treatment of a document is requested, at least four (4) additional copies must be filed, in which the confidential information must be deleted (see the following paragraph for further information regarding confidential business information). The Commission's rules authorize filing submissions with the Secretary by facsimile or electronic means only to the extent permitted by section 201.8 of the rules (see Handbook for Electronic Filing Procedures, *http://www.usitc.gov/secretary/fed_reg_notices/rules/documents/handbook_on_electronic_filing.pdf*). Persons with questions regarding electronic filing should contact the Office of the Secretary (202–205–2000).

Any submissions that contain confidential business information must also conform with the requirements of section 201.6 of the Commission's Rules of Practice and Procedure (19 CFR 201.6). Section 201.6 of the rules requires that the cover of the document and the individual pages be clearly marked as to whether they are the ''confidential'' or ''non-confidential'' version, and that the confidential business information be clearly identified by means of brackets. All written submissions, except for confidential business information, will be made available for inspection by interested parties.

In his request letter, the USTR stated that his office intends to make the Commission's reports available to the public in their entirety, and asked that the Commission not include any confidential business information or national security classified information in the reports that the Commission transmits to his office. Any confidential business information received by the Commission in this investigation and used in preparing this report will not be published in a manner that would reveal the operations of the firm supplying the information.

By order of the Commission.

Issued: December 7, 2009.

Marilyn R. Abbott,

Secretary to the Commission.

[FR Doc. E9–29518 Filed 12–10–09; 8:45 am]

BILLING CODE 7020–02–P

DEPARTMENT OF JUSTICE

Drug Enforcement Administration

Importer of Controlled Substances; Notice of Application

Pursuant to 21 U.S.C. 958(i), the Attorney General shall, prior to issuing a registration under this Section to a bulk manufacturer of a controlled substance in schedule I or II, and prior to issuing a regulation under 21 U.S.C. 952(a)(2), authorizing the importation of such a substance, provide manufacturers holding registrations for the bulk manufacture of the substance an opportunity for a hearing.

Therefore, in accordance with 21 CFR 1301.34(a), this is notice that on October 20, 2009, Tocris Cookson, Inc., 16144 Westwoods Business Park, Ellisville, Missouri 63021–4500, made application

by renewal to the Drug Enforcement Administration (DEA) to be registered as an importer of the basic classes of controlled substances listed in schedules I and II:

Drug	Schedule
Marihuana (7360)	I
Tetrahydrocannabinols (7370)	I
4-Bromo-2, 5-dimethoxyamphetamine. (7391)	I
3, 4-Methylenedioxymethamphetamine. (7405)	I
Amphetamine (1100)	II
Phencyclidine (7471)	II
Cocaine (9041)	II
Diprenorphine (9058)	II
Fentanyl (9801)	II

The company plans to import small quantities of the above listed controlled substances for non-clinical, laboratory-based research only.

In reference to drug code 7360 (Marihuana), the company plans to import synthetic cannabinoid agonists. In reference to drug code 7370 (Tetrahydrocannabinols), the company will import a synthetic Delta–9–THC. No other activity for these drug codes are authorized for this registration.

Any bulk manufacturer who is presently, or is applying to be, registered with DEA to manufacture such basic classes of controlled substances may file comments or objections to the issuance of the proposed registration and may, at the same time, file a written request for a hearing on such application pursuant to 21 CFR 1301.43 and in such form as prescribed by 21 CFR 1316.47.

Any such comments or objections should be addressed, in quintuplicate, to the Drug Enforcement Administration, Office of Diversion Control, Federal Register Representative (ODL), 8701 Morrissette Drive, Springfield, Virginia 22152; and must be filed no later than January 11, 2010.

This procedure is to be conducted simultaneously with, and independent of, the procedures described in 21 CFR 1301.34(b), (c), (d), (e), and (f). As noted in a previous notice published in the **Federal Register** on September 23, 1975, (40 FR 43745–46), all applicants for registration to import a basic class of any controlled substances in schedule I or II are, and will continue to be, required to demonstrate to the Deputy Assistant Administrator, Office of Diversion Control, Drug Enforcement Administration, that the requirements for such registration pursuant to 21 U.S.C. 958(a); 21 U.S.C. 823(a); and 21 CFR 1301.34(b), (c), (d), (e), and (f) are satisfied.

Dated: December 1, 2009.

Joseph T. Rannazzisi,

Deputy Assistant Administrator, Office of Diversion Control, Drug Enforcement Administration.

[FR Doc. E9–29542 Filed 12–10–09; 8:45 am]

BILLING CODE 4410–09–P

DEPARTMENT OF JUSTICE

Drug Enforcement Administration

Manufacturer of Controlled Substances; Notice of Application

Pursuant to § 1301.33(a) of Title 21 of the Code of Federal Regulations (CFR), this is notice that on September 28, 2009, Cedarburg Pharmaceuticals, Inc., 870 Badger Circle, Grafton, Wisconsin 53024, made application by renewal to the Drug Enforcement Administration (DEA) as a bulk manufacturer of the basic classes of controlled substances listed in schedules I and II:

Drug	Schedule
Tetrahydrocannabinols (7370)	I
Dihydromorphine (9145)	I
Dihydrocodeine (9120)	II
Oxycodone (9143)	II
Hydromorphone (9150)	II
Hydrocodone (9193)	II
Remifentanil (9739)	II
Sufentanil (9740)	II
Fentanyl (9801)	II

The company plans to manufacture the listed controlled substances in bulk for distribution to its customers.

In reference to drug code 7370 the company plans to bulk manufacture a synthetic Tetrahydrocannabinol. No other activity for this drug code is authorized for this registration.

Any other such applicant, and any person who is presently registered with DEA to manufacture such substances, may file comments or objections to the issuance of the proposed registration pursuant to 21 CFR 1301.33(a).

Any such written comments or objections should be addressed, in quintuplicate, to the Drug Enforcement Administration, Office of Diversion Control, Federal Register Representative (ODL), 8701 Morrissette Drive, Springfield, Virginia 22152; and must be filed no later than February 9, 2010.

Dated: December 1, 2009.

Joseph T. Rannazzisi,

Deputy Assistant Administrator, Office of Diversion Control, Drug Enforcement Administration.

[FR Doc. E9–29527 Filed 12–10–09; 8:45 am]

BILLING CODE 4410–09–P

DEPARTMENT OF JUSTICE

Office of Justice Programs

[OJP (NIJ) Docket No. 1510]

Vehicular Digital Multimedia Evidence Recording System Standard Special Technical Committee

AGENCY: National Institute of Justice.

ACTION: Notice of request for proposals for certification and testing expertise.

SUMMARY: The National Institute of Justice (NIJ) is in the process of developing a new Vehicular Digital Multimedia Evidence Recording System Standard and corresponding certification program requirements. This work is being performed by a Special Technical Committee (STC), comprised of practitioners from the field, researchers, testing experts, certification experts, and representatives from stakeholder organizations. It is anticipated that the STC members will participate in six 2-day meetings over a 9-month time period with the goal of completing development of the standard and certification program requirements. It is anticipated that STC meetings will begin in mid-January 2010. Travel expenses and per diem will be reimbursed for all STC meetings; however, participation time will not be funded.

NIJ is seeking representatives from (1) certification bodies and (2) test laboratories with experience in programs for similar types of electronic equipment. Additional preferred knowledge includes experience with in-car video systems or experience with law enforcement operations. There are up to four positions to be filled on the STC, and NIJ will accept the first 20 submissions for review.

Interested parties are requested to nominate individuals from their organizations and submit no more than two pages describing the nominee's applicable experience, preferred knowledge, and affiliations with standards development organizations. This information shall be submitted to Frances Scott at *frances.scott@usdoj.gov* by December 22, 2009. The submissions will be reviewed, and participants will be notified regarding their acceptance by January 8, 2009.

FOR FURTHER INFORMATION CONTACT: Casandra Robinson by telephone at 202–305–2296 [**Note:** this is not a toll-free

telephone number], or by e-mail at *Casandra.robinson@usdoj.gov.*

Kristina Rose,

Acting Director, National Institute of Justice.

[FR Doc. E9–29546 Filed 12–10–09; 8:45 am]

BILLING CODE 4410–18–P

DEPARTMENT OF JUSTICE

Office of Justice Programs

[OJP (NIJ) Docket No. 1509]

Walk-through and Handheld Metal Detector Standards Panel

AGENCY: National Institute of Justice.

ACTION: Notice of request for proposals for certification and testing expertise.

SUMMARY: The National Institute of Justice (NIJ) is in the process of revising the Walk-through and Handheld Metal Detector Standards and developing corresponding certification program requirements. This work is being performed by a Special Technical Committee (STC), comprised of practitioners from the field, researchers, testing experts, certification experts, and representatives from stakeholder organizations. It is anticipated that the STC members will participate in six 2-day meetings over a 9-month time period with the goal of completing development of the standard and certification program requirements. It is anticipated that STC meetings will begin in mid-January 2010. Travel expenses and per diem will be reimbursed for all STC meetings; however, participation time will not be funded.

NIJ is seeking representatives from (1) certification bodies and (2) test laboratories with experience in programs for similar types of electronic equipment. Additional preferred knowledge includes experience with metal detectors or experience with corrections, courts or school safety. There are up to four positions to be filled on the STC, and NIJ will accept the first 20 submissions for review.

Interested parties are requested to nominate individuals from their organizations and submit no more than two pages describing the nominee's applicable experience, preferred knowledge, and affiliations with standards development organizations. This information shall be submitted to Casandra Robinson at *casandra.robinson@usdoj.gov* by December 22, 2009. The submissions will be reviewed, and participants will be notified regarding their acceptance by January 8, 2009.

FOR FURTHER INFORMATION CONTACT: Casandra Robinson by telephone at 202–305–2296 [**Note:** This is not a toll-free telephone number], or by e-mail at *Casandra.robinson@usdoj.gov.*

Kristina Rose,

Acting Director, National Institute of Justice.

[FR Doc. E9–29549 Filed 12–10–09; 8:45 am]

BILLING CODE 4410–18–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–71,251]

Ancor Specialties; a Division of Hoeganaes Corporation Ridgway, PA; Notice of Affirmative Determination Regarding Application for Reconsideration

By application dated November 13, 2009, a petitioner requested administrative reconsideration of the negative determination regarding workers' eligibility to apply for Trade Adjustment Assistance (TAA) applicable to workers and former workers of the subject firm. The determination was issued on October 15, 2009. The Notice of Determination will soon be published in the **Federal Register**.

The initial investigation resulted in a negative determination based on the finding that imports of alloyed powders and powder metal parts did not contribute importantly to worker separations at the subject firm and no shift of production to a foreign source occurred.

In the request for reconsideration, the petitioner alleged that workers of the subject firm did manufacture powder metal parts during the period under investigation. The petitioner also provided additional information regarding customers of the subject firm.

The Department has carefully reviewed the request for reconsideration and the existing record and has determined that the Department will conduct further investigation to determine if the workers meet the eligibility requirements of the Trade Act of 1974.

Conclusion

After careful review of the application, I conclude that the claim is of sufficient weight to justify reconsideration of the U.S. Department of Labor's prior decision. The application is, therefore, granted.

Signed at Washington, DC, this 25th day of November 2009.

Elliott S. Kushner,

Certifying Officer, Division of Trade Adjustment Assistance.

[FR Doc. E9–29502 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–71,014]

Jeld-Wen, Inc., Hawkins Window Division, Including On-Site Leased Workers From Nicolet Staffing, Hawkins, WI; Notice of Affirmative Determination Regarding Application for Reconsideration

By application dated November 17, 2009, the petitioners requested administrative reconsideration of the negative determination regarding workers' eligibility to apply for Trade Adjustment Assistance (TAA) applicable to workers and former workers of the subject firm. The determination was issued on October 8, 2009. The Notice of Determination will soon be published in the **Federal Register**.

The initial investigation resulted in a negative determination based on the finding that imports of wood and aluminum clad windows and patio doors did not contribute importantly to worker separations at the subject firm. The investigation revealed that the subject firm did not shift production of wood and aluminum clad windows and patio doors to foreign countries during the period under investigation.

In the request for reconsideration, the petitioner alleged that Jeld-Wen reduced employment levels at the subject facility as a direct result of shifts in production abroad. The petitioner also provided additional information regarding customers of the subject firm.

The Department has carefully reviewed the request for reconsideration and the existing record and has determined that the Department will conduct further investigation to determine if the workers meet the eligibility requirements of the Trade Act of 1974.

Conclusion

After careful review of the application, I conclude that the claim is of sufficient weight to justify reconsideration of the U.S. Department of Labor's prior decision. The application is, therefore, granted.

Signed at Washington, DC, this 3rd day of December 2009.

Elliott S. Kushner,

Certifying Officer, Division of Trade Adjustment Assistance.

[FR Doc. E9–29501 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–62,994]

Essex Group, Inc.; a Subsidiary of Superior Essex, Inc. Including On-Site Leased Workers From American Security & Investigation Vincennes, IN; Amended Certification Regarding Eligibility To Apply for Worker Adjustment Assistance and Alternative Trade Adjustment Assistance

In accordance with Section 223 of the Trade Act of 1974 (19 U.S.C. 2273), and Section 246 of the Trade Act of 1974 (26 U.S.C. 2813), as amended, the Department of Labor issued a Certification of Eligibility to Apply for Worker Adjustment Assistance and Alternative Trade Adjustment Assistance on March 21, 2008, applicable to workers of Essex Group, Inc., a subsidiary of Superior Essex, Inc., Vincennes, Indiana. The notice was published in the **Federal Register** on April 24, 2008 (73 FR 22169).

At the request of the petitioners, the Department reviewed the certification for workers of the subject firm. The workers produce copper and aluminum magnet wire.

New information shows that workers leased from American Security & Investigation were employed on-site at the Vincennes, Indiana location of Essex Group, Inc., a subsidiary of Superior Essex, Inc.

The Department has determined that these workers were sufficiently under the control and in support of the subject firm to be considered leased workers.

Based on these findings, the Department is amending this certification to include workers leased from American Security & Investigation working on-site at the Vincennes, Indiana location of Essex Group, Inc., a subsidiary of Superior Essex, Inc.

The amended notice applicable to TA–W–62,994 is hereby issued as follows:

All workers of Essex Group, Inc., a subsidiary of Superior Essex, Inc., Vincennes, Indiana, including on-site leased workers from American Security & Investigation, Vincennes, Indiana who became totally or partially separated from employment on or after March 4, 2007 through March 21, 2010, are eligible to apply for adjustment assistance under Section 223 of the Trade Act of 1974, and are also eligible to apply for alternative trade adjustment assistance under Section 246 of the Trade Act of 1974.

Signed in Washington, DC, this 20th day of November 2009.

Richard Church,

Certifying Office, Division of Trade Adjustment Assistance.

[FR Doc. E9–29506 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–63,793]

General Motors Corporation, Vehicle Manufacturing Division, Shreveport Assembly Plant, Including On-Site Leased Workers From Developmental Dimensions International and Premier Manufacturing Support Services, Including On-Site Workers From Delphi Corporation Shreveport, LA; Amended Certification Regarding Eligibility To Apply for Worker Adjustment Assistance and Alternative Trade Adjustment Assistance

In accordance with Section 223 of the Trade Act of 1974 (19 U.S.C. 2273), and Section 246 of the Trade Act of 1974 (26 U.S.C. 2813), as amended, the Department of Labor issued a Certification of Eligibility to Apply for Worker Adjustment Assistance and Alternative Trade Adjustment Assistance on August 27, 2008, applicable to workers of General Motors Corporation, vehicle Manufacturing Division, Shreveport Assembly Plant, including on-site leased workers of Developmental Dimensions International, Shreveport, Louisiana. The notice was published in the **Federal Register** on September 12, 2008 (73 FR 53045). The notice was amended on October 9, 2008 to include on-site leased workers from Premier Manufacturing Support Services. The notice was published in the **Federal Register** on October 20, 2008 (73 FR 62321).

At the request of the petitioners, the Department reviewed the certification for workers of the subject firm. The workers assemble Chevrolet Colorado, GMC Canyon and Hummer H3 vehicles.

New information shows that workers of Delphi Corporation were employed on-site to provide engineering support services at the Shreveport Assembly Plant, Shreveport, Louisiana location of General Motors, Vehicle Manufacturing Division.

The Department has determined that these workers were in support and sufficiently under the control of the subject firm to be included this certification.

Based on these findings, the Department is amending this certification to include workers of Delphi Corporation working on-site at the Shreveport Assembly Plant, Shreveport, Louisiana location of the subject firm.

The intent of the Department's certification is to include all workers employed at General Motors Corporation, Vehicle Manufacturing Division, Shreveport Assembly Plant, Shreveport, Louisiana who were adversely affected by increased imports of Chevrolet Colorado, GMC Canyon and Hummer H3 vehicles.

The amended notice applicable to TA–W–63,793 is hereby issued as follows:

All workers of General Motors Corporation, Vehicle Manufacturing Division, Shreveport Assembly Plant, including on-site leased workers from Developmental Dimensions International, Premier Manufacturing Support Services and including on-site workers from Delphi Corporation, Shreveport, Louisiana, who became totally or partially separated from employment on or after August 1, 2007, through August 27, 2010, are eligible to apply for adjustment assistance under Section 223 of the Trade Act of 1974, and are also eligible to apply for alternative trade adjustment assistance under Section 246 of the Trade Act of 1974.

Signed at Washington, DC, this 20th day of November 2009.

Richard Church,

Certifying Officer, Division of Trade Adjustment Assistance.

[FR Doc. E9–29508 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–70,048]

Symantec Corporation; Symantec Accounts Payable/Expanse Reporting Team, Finance Department, and Information Technology Division, Including On-Site Leased Workers From Pro Unlimited, Inc., Springfield, OR; Amended Certification Regarding Eligibility To Apply for Worker Adjustment Assistance

In accordance with Section 223 of the Trade Act of 1974, as amended (''Act''), 19 U.S.C. 2273, the Department of Labor issued a Certification of Eligibility to

Apply for Worker Adjustment Assistance on July 21, 2009, applicable to workers of Symantec Corporation, Symantec Accounts Payable/Expanse Reporting Team, Finance Department, Springfield, Oregon. The notice was published in the **Federal Register** on September 2, 2009 (74 FR 45477). The notice of was amended on August 25, 2009 to include on-site leased workers of Pro Unlimited, Inc. The notice was published in the **Federal Register** on September 22, 2009 (74 FR 48295).

The Department of Labor reviewed the certification for workers of the subject firm and concluded that workers in the Information Technology Division should be included in the certification decision.

Accordingly, the Department is amending this certification to include the Information Technology Division, Symantec Corporation, Springfield, Oregon.

The amended notice applicable to TA–W–70,048 is hereby issued as follows:

All workers of Symantec Corporation, Symantec Accounts Payable/Expense Reporting Team, Finance Department, Information Technology Division, including on-site leased workers from Pro Unlimited, Springfield, Oregon, who became totally or partially separated from employment on or after May 18, 2008, through July 21, 2011, and all workers in the group threatened with total or partial separation from employment on date of certification through two years from the date of certification, are eligible to apply for adjustment assistance under Chapter 2 of Title II of the Trade Act of 1974, as amended.

Signed at Washington, DC, this 24th day of November 2009.

Richard Church,

Certifying Officer, Division of Trade Adjustment Assistance.

[FR Doc. E9–29511 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–70,030]

Pittsburgh Glass Works, LLC, Plant No. 23, Including On-Site Leased Workers From Belcan Techservices Division and Securitas Security Services Evart, MI; Amended Certification Regarding Eligibility To Apply for Worker Adjustment Assistance

In accordance with Section 223 of the Trade Act of 1974, as amended (''Act''), 19 U.S.C. 2273, the Department of Labor issued a Certification of Eligibility to Apply for Worker Adjustment Assistance on October 21, 2009, applicable to workers of Pittsburgh Glass Works, LLC, Plant No. 23, Evart, Michigan. The notice will be published soon in the **Federal Register**.

At the request of company officials, the Department reviewed the certification for workers of the subject firm. The workers are engaged in the production of automotive glass.

The company reports that on-site leased workers from Belcan TechServices Division and Securitas Security Services were employed on-site at the Evart, Michigan location of Pittsburgh Glass Works, LLC, Plant No. 23.

The Department has determined that these workers were sufficiently under the control of the subject firm to be considered leased workers.

Based on these findings, the Department is amending this certification to include workers leased from Belcan TechServices Division and Securitas Security Services working on-site at the Evart, Michigan location of Pittsburgh Glass Works, LLC, Plant No. 23.

The amended notice applicable to TA–W–70,030 is hereby issued as follows:

All workers of Pittsburgh Glass Works, LLC, Plant No. 23, including on-site leased workers from Belcan TechServices Division and Securitas Security Services, Evart, Michigan, who became totally or partially separated from employment on or after May 18, 2008 through October 21, 2011, and all workers in the group threatened with total or partial separation from employment on the date of certification, are eligible to apply for adjustment assistance under Chapter 2 of Title II of the Trade Act of 1974, as amended.

Signed at Washington, DC, this 23rd day of November 2009.

Richard Church,

Certifying Officer, Division of Trade Adjustment Assistance.

[FR Doc. E9–29510 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–64,489]

Wyeth Pharmaceuticals, a Subsidiary of Wyeth, Currently Known as Pfizer, Rouses Point, NY; Amended Certification Regarding Eligibility To Apply for Worker Adjustment Assistance and Alternative Trade Adjustment Assistance

In accordance with Section 223 of the Trade Act of 1974 (19 U.S.C. 2273), as amended, the Department of Labor issued a Certification of Eligibility to Apply for Worker Adjustment Assistance and Alternative Trade Adjustment Assistance on December 11, 2008, applicable to workers of Wyeth Pharmaceuticals, a subsidiary of Wyeth, Rouses Point, New York. The notice was published in the **Federal Register** December 30, 2008 (73 FR 79914).

At the request of the state agency, the Department reviewed the certification for workers of the subject firm. The workers are engaged in activities related to the production of various pharmaceutical products such as Rapaume Liquid, Effexor, Premarin IV, Premarin, Prempro, Premarin Vaginal Cream, CEDL, and CEC.

New information shows that some workers separated from employment at the subject firm had their wages reported under a separate unemployment insurance (UI) tax account for Pfizer.

Accordingly, the Department is amending the certification to properly reflect this matter.

The intent of the Department's certification is to include all workers of Wyeth Pharmaceuticals, a subsidiary of Wyeth, currently known as Pfizer, who were adversely affected by a shift in plant production of various pharmaceutical products to Canada.

The amended notice applicable to TA–W–64,489 is hereby issued as follows:

All workers of Wyeth Pharmaceuticals, a subsidiary of Wyeth, currently known as Pfizer, Rouses Point, New York, who become totally or partially separated from employment on or after November 19, 2007, through December 11, 2010, are eligible to apply for adjustment assistance under Section 223 of the Trade Act of 1974, and are also eligible to apply for alternative trade adjustment assistance under Section 246 of the Trade Act of 1974.

Signed in Washington, DC, this 24th day of November 2009.

Elliott S. Kushner,

Certifying Officer, Division of Trade Adjustment Assistance.

[FR Doc. E9–29509 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–63,432]

Kongsburg Automotive Driveline Systems Division Including On-Site Leased Workers From People Link, Staffing Solutions And Qci Technical Staffing Van Wert, OH; Amended Certification Regarding Eligibility To Apply for Worker Adjustment Assistance and Alternative Trade Adjustment Assistance

In accordance with Section 223 of the Trade Act of 1974 (19 U.S.C. 2273), and Section 246 of the Trade Act of 1974 (26 U.S.C. 2813), as amended, the Department of Labor issued a Certification of Eligibility to Apply for Worker Adjustment Assistance and Alternative Trade Adjustment Assistance on June 19, 2008, applicable to workers of Kongsburg Automotive, Driveline Systems Division, including on-site leased workers from People Link and Staffing Solutions, Van Wert, Ohio. The notice was published in the **Federal Register** on July 14, 2008 (73 FR 40388).

At the request of the petitioners, the Department reviewed the certification for workers of the subject firm. The workers produce automotive shift cables and shirt towers.

New information shows that workers leased from QCI Technical Staffing were employed on-site at the Van Wert, Ohio location of Kongsburg Automotive, Driveline Systems Division. The Department has determined that these workers were sufficiently under the control of the subject firm to be considered leased workers.

Based on these findings, the Department is amending this certification to include workers leased from QCI Technical Staffing working on-site at the Van Wert, Ohio location of Kongsburg Automotive, Driveline Systems Division.

The amended notice applicable to TA–W–63,432 is hereby issued as follows:

All workers of Kongsberg Automotive, Driveline Systems Division, including on-site leased workers from People Link, Staffing Solutions and QCI Technical Staffing, Van Wert, Ohio, who became totally or partially separated from employment on or after May 8, 2007, through June 19, 2010, are eligible to apply for adjustment assistance under Section 223 of the Trade Act of 1974, and are also eligible to apply for alternative trade adjustment assistance under Section 246 of the Trade Act of 1974.

Signed at Washington, DC this 24th day of November 2009.

Elliott S. Kushner,

Certifying Officer, Division of Trade Adjustment Assistance.

[FR Doc. E9–29507 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–72,314]

Air System Components Including On-Site Leased Workers From Dmdickason Personnel El Paso, TX; Amended Certification Regarding Eligibility To Apply for Worker Adjustment Assistance

In accordance with Section 223 of the Trade Act of 1974, as amended (''Act''), 19 U.S.C. 2273, the Department of Labor issued a Certification of Eligibility to Apply for Worker Adjustment Assistance on October 23, 2009, applicable to workers of Air System Components, including on-site leased workers from DmDickason Personnel, El Paso, Texas. The notice will be published soon in the **Federal Register**.

At the request of the State Agency, the Department reviewed the certification for workers of the subject firm. The workers are engaged in the production of ventilation fans.

The review shows that on May 31, 2007, a certification of eligibility to apply for adjustment assistance was issued for all workers of Air System Components, Inc., El Paso Division, El Paso, Texas, separated from employment on or after April 20, 2006 through May 31, 2009. The notice was published in the **Federal Register** on June 14, 2007 (72 FR 32917).

In order to avoid an overlap in worker group coverage, the Department is amending the September 8, 2008 impact date established for TA–W–72,314, to read June 1, 2009.

The amended notice applicable to TA–W–72,314 is hereby issued as follows:

All workers of Air System Components, including on-site leased workers from DmDickason Personnel, El Paso, Texas, who became totally or partially separated from employment on or after June 1, 2009, through October 23, 2011, and all workers in the group threatened with total or partial separation from employment on date of certification through two years from the date of certification, are eligible to apply for adjustment assistance under Chapter 2 of Title II of the Trade Act of 1974, as amended.

Signed in Washington, DC, this 20th day of November, 2009.

Richard Church,

Certifying Officer, Division of Trade Adjustment Assistance.

[FR Doc. E9–29505 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

Notice of Determinations Regarding Eligibility To Apply for Worker Adjustment Assistance

In accordance with Section 223 of the Trade Act of 1974, as amended (19 USC 2273) the Department of Labor herein presents summaries of determinations regarding eligibility to apply for trade adjustment assistance for workers by (TA–W) number issued during the period of *October 19 through October 30, 2009.*

In order for an affirmative determination to be made for workers of a primary firm and a certification issued regarding eligibility to apply for worker adjustment assistance, each of the group eligibility requirements of Section 222(a) of the Act must be met.

I. Under Section 222(a)(2)(A), the following must be satisfied:

(1) A significant number or proportion of the workers in such workers' firm have become totally or partially separated, or are threatened to become totally or partially separated;

(2) The sales or production, or both, of such firm have decreased absolutely; and

(3) One of the following must be satisfied:

(A) Imports of articles or services like or directly competitive with articles produced or services supplied by such firm have increased;

(B) Imports of articles like or directly competitive with articles into which one or more component parts produced by such firm are directly incorporated, have increased;

(C) Imports of articles directly incorporating one or more component parts produced outside the United States that are like or directly competitive with imports of articles incorporating one or more component parts produced by such firm have increased;

(D) Imports of articles like or directly competitive with articles which are produced directly using services supplied by such firm, have increased; and

(4) The increase in imports contributed importantly to such

workers' separation or threat of separation and to the decline in the sales or production of such firm; or

II. Section 222(a)(2)(B) all of the following must be satisfied:

(1) A significant number or proportion of the workers in such workers' firm have become totally or partially separated, or are threatened to become totally or partially separated;

(2) One of the following must be satisfied:

(A) There has been a shift by the workers' firm to a foreign country in the production of articles or supply of services like or directly competitive with those produced/supplied by the workers' firm;

(B) There has been an acquisition from a foreign country by the workers' firm of articles/services that are like or directly competitive with those produced/supplied by the workers' firm; and

(3) The shift/acquisition contributed importantly to the workers' separation or threat of separation.

In order for an affirmative determination to be made for adversely affected workers in public agencies and a certification issued regarding eligibility to apply for worker adjustment assistance, each of the group eligibility requirements of Section 222(b) of the Act must be met.

(1) A significant number or proportion of the workers in the public agency have become totally or partially separated, or are threatened to become totally or partially separated;

(2) The public agency has acquired from a foreign country services like or directly competitive with services which are supplied by such agency; and

(3) The acquisition of services contributed importantly to such workers' separation or threat of separation.

In order for an affirmative determination to be made for adversely affected secondary workers of a firm and a certification issued regarding eligibility to apply for worker adjustment assistance, each of the group eligibility requirements of Section 222(c) of the Act must be met.

(1) A significant number or proportion of the workers in the workers' firm have become totally or partially separated, or are threatened to become totally or partially separated;

(2) The workers' firm is a Supplier or Downstream Producer to a firm that employed a group of workers who received a certification of eligibility under Section 222(a) of the Act, and such supply or production is related to the article or service that was the basis for such certification; and

(3) Either—

(A) The workers' firm is a supplier and the component parts it supplied to the firm described in paragraph (2) accounted for at least 20 percent of the production or sales of the workers' firm; or

(B) A loss of business by the workers' firm with the firm described in paragraph (2) contributed importantly to the workers' separation or threat of separation.

In order for an affirmative determination to be made for adversely affected workers in firms identified by the International Trade Commission and a certification issued regarding eligibility to apply for worker adjustment assistance, each of the group eligibility requirements of Section 222(f) of the Act must be met.

(1) The workers' firm is publicly identified by name by the International Trade Commission as a member of a domestic industry in an investigation resulting in—

(A) An affirmative determination of serious injury or threat thereof under section 202(b)(1);

(B) An affirmative determination of market disruption or threat thereof under section 421(b)(1); or

(C) An affirmative final determination of material injury or threat thereof under section 705(b)(1)(A) or 735(b)(1)(A) of the Tariff Act of 1930 (19 U.S.C. 1671d(b)(1)(A) and 1673d(b)(1)(A));

(2) The petition is filed during the 1-year period beginning on the date on which—

(A) A summary of the report submitted to the President by the International Trade Commission under section 202(f)(1) with respect to the affirmative determination described in paragraph (1)(A) is published in the **Federal Register** under section 202(f)(3); or

(B) Notice of an affirmative determination described in subparagraph (1) is published in the **Federal Register**; and

(3) The workers have become totally or partially separated from the workers' firm within—

(A) The 1-year period described in paragraph (2); or

(B) Notwithstanding section 223(b)(1), the 1-year period preceding the 1-year period described in paragraph (2).

Affirmative Determinations for Worker Adjustment Assistance

The following certifications have been issued. The date following the company name and location of each determination references the impact date for all workers of such determination.

The following certifications have been issued. The requirements of Section 222(a)(2)(A) (increased imports) of the Trade Act have been met.

TA–W–70,612; Holcim (US), Inc., Dundee Plant Div., Independent Contractors, Dundee, MI: May 22, 2008.

TA–W–70,841; Alliance Carolina Tool and Mold Corporation, Plastics Division, Arden, NC: May 29, 2008.

TA–W–70,892; Eastern Screw Company, Inc., Allesco Industries, Inc., Johnston, RI: June 1, 2008.

TA–W–71,021; Martinrea Industries, Inc., Reed City Tool and Die, Reed City, MI: March 7, 2009.

TA–W–71,072; Stanley Tools, Division of The Stanley Works, Inc., Pittsfield, VT: June 8, 2008.

TA–W–71,205; ArcelorMittal Georgetown, Georgetown, SC: June 15, 2008.

TA–W–71,641; Rocky Mountain Poison and Drug Center, Denver Health and Hospital Authority, Denver, CO: July 10, 2008.

TA–W–71,742; Kilian Manufacturing, Adecco Employment Services, etc, Syracuse, NY: July 17, 2008.

TA–W–71,743; HWD Acquisition, Inc., Formerly Monarchy Holding, Inc., Medford, WI: July 16, 2008.

TA–W–71,920; Weyerhaeuser NR, Engineered Wood Products, Albany, OR: August 3, 2008.

TA–W–72,309; Neapco, LLC, Components Division, Pottstown, PA: September 14, 2008.

TA–W–65,242; Sierra Pacific Industries, Aberdeen, WA: February 2, 2008.

TA–W–70,613; Technicolor Business Group, Thomas, Inc., Technicolor Home, Select, Staff Line, Livonia, MI: May 15, 2008.

TA–W–70,154; Titanx Engine Cooling, Adecco Engineering and Technical and Kelly Services, Jamestown, NY: May 5, 2009.

TA–W–70,216; Nexergy, Inc., Canon City, CO: May 18, 2008.

TA–W–70,238; Straits Steel and Wire Company, SSW Holding Company, Inc., Ludington, MI: May 18, 2008.

TA–W–70,277; Mississippi Polymers, Inc., Corinth, MS: May 19, 2008.

TA–W–70,383; Veyance Technologies Inc., Kelly Scientific & Independent Contractors, Sun Prairie, WI: May 20, 2008.

TA–W–70,494; Alliance Castings Company, LLC, Ohio Castings/ Leased Worker of Select Pro, Inc., Alliance, OH: May 21, 2008.

TA–W–70,514; Wisconsin Metal Products, Racine, WI: May 19, 2008.

TA–W–70,520A; The Boeing Company, Commercial Aircraft Group, Portland, OR: May 22, 2008.

TA–W–70,520; The Boeing Company, Commercial Aircraft Group, Puget Sound, WA: May 22, 2008.
TA–W–70,536; Barcalounger Corporation, Hancock Park Associates, Rocky Mount, NC: May 21, 2008.
TA–W–70,643; Murphy Veneer Company, White City, OR: May 18, 2008.
TA–W–70,700; D/E Associates, Inc., Travelarts Division, Shamokin, PA: May 27, 2008.
TA–W–70,797; Ramrod Industries LLC, Spencer, WI: May 19, 2008.
TA–W–70,849; Venta Airwasher LLC, Itasca, IL: May 28, 2008.
TA–W–70,881; Superior Fibers Shawnee, LLC, Superior Fiber, LLC, Shawnee, OH: June 2, 2008.
TA–W–71,236; Diversified Machine, LLC, Milwaukee, WI: June 12, 2008.
TA–W–71,684; Quality Mould, Inc., Latrobe, PA: July 9, 2008.
TA–W–72,101; PGI Manufacturing, LLC, Rockford, IL: August 19, 2008.
TA–W–72,207; General Electric Ohio Lamp Plant, Consumer and Industrial Lighting Division, Leased Workers of OSS, Inc., Warren, OH: August 15, 2008.
TA–W–72,297; National Office Furniture—Santa Claus, Santa Claus, IN: September 14, 2008.
TA–W–72,336; Iseli Company, Div. of Danaher Tool Group/Leased Workers from The Hire Source, Plymouth, CT: September 9, 2008.
TA–W–72,345; Carolina Glue Chip, Inc., Wilkesboro, NC: September 15, 2008.
TA–W–72,374; Higgins Embroidery, Inc., Lineville, AL: September 21, 2008.
TA–W–70,464; Quantumplus Limited Partnership, dba Tabs Direct, Inc./Rapp, Matrix, Excuteam, etc, Stafford, TX: May 19, 2008.
TA–W–70,958; Liang's Sewing, San Francisco, CA: May 19, 2008.

The following certifications have been issued. The requirements of Section 222(a)(2)(B) (shift in production or services) of the Trade Act have been met.

TA–W–71,476; Lyondellbasell Advanced Polydefins, Inc., Leased Workers from Aerotek Commercial, Mansfield, TX: June 18, 2008.
TA–W–70,160; Knoll, Incorporated, Wood Finishing Dept., Adecco and Tac Worldwide, East Greenville, PA: May 18, 2008.
TA–W–70,235; SCI, LLC/Zener-Rectifier, ON Semiconductor, Phoenix, AZ: May 18, 2008.
TA–W–70,259; Chemetall Foote Corporation, Rockwood Holdings, Inc./Leased Workers from Sarnoc, Inc., Silver Peak, NV: May 15, 2008.
TA–W–70,311; Newport Precision, Inc., Hitachi Metals America, Newport, TN: May 19, 2008.
TA–W–70,472A; Modus Link Corporation, Americas Div., Select Staffing, Lindon, UT: May 20, 2008.
TA–W–70,472B; Modus Link Corporation, Americas Div., Select Staffing, Morrisville, NC: May 20, 2008.
TA–W–70,472C; Modus Link Corporation, Americas Div., Select Staffing, Smyrna (Nashville), TN: May 20, 2008.
TA–W–70,472; Modus Link Corporation, Americas Div., Select Staffing, Indianapolis, IN: May 20, 2008.
TA–W–70,586; Sun Microsystems, Inc., World Wide Operations, Recording Head Operations, Leased Workers Prounlimited, Louisville, CO: May 22, 2008.
TA–W–70,617; Bayer MaterialScience, LLC, Bayer Corporation, Including Belcan, New Martinsville, WV: May 22, 2008.
TA–W–70,652A; Fleetwood Travel Trailers of Oregon, La Grande, OR: May 20, 2008.
TA–W–70,652; Fleetwood Travel Trailers of Oregon, Pendleton, OR: May 20, 2008.
TA–W–70,656; RBC Manufacturing Corporation, Regal Beloit Corporation/Leased Workers from Seek Careers, Grafton, WI: May 26, 2008.
TA–W–70,807; Honeywell International, Automation & Control Solutions, Sensing & Control Division, Freeport, IL: May 18, 2008.
TA–W–70,808; Honeywell International, Production of Avionics, Olathe, KS: May 18, 2008.
TA–W–70,809; Honeywell International, Automation & Control, Sensing and Control, Woonsocket, RI: May 18,2008.
TA–W–70,810; Honeywell International, Automation & Control, Sensing & Control, Transparent Heather, Pawtucket, RI: May 21, 2008.
TA–W–70,968; Trinity North American Freight Car, Inc., Freightcar Division/Trinity Industries, Inc., Global, Cartersville, GA: May 19, 2008.
TA–W–71,020; Vishay Sprague, Inc., d/b/a Vishay Cera-Mite/Adecco Employment, Grafton, WI: June 5, 2008.
TA–W–71,036; AMETEK, Inc., Floorcare and Specialty Motors Division, Kent, OH: June 2, 2008.
TA–W–71,161; Standard Motor Products, Inc., Leased Workers from Action Staffing, Wilson, NC: June 10, 2008.
TA–W–71,168A; Agilent Technologies, EESOF Div., Volt, Santa Rosa, CA: June 2, 2008.
TA–W–71,168B; Agilent Technologies, EESOF Div., Volt, Santa Clara, CA: June 2, 2008.
TA–W–71,168C; Agilent Technologies, EESOF Div., Volt, Alpharetta, GA: June 2, 2008.
TA–W–71,168D; Agilent Technologies, EESOF, Volt, Everett, WA: June 2, 2008.
TA–W–71,168; Agilent Technologies, EESOF Div., Volt, Westlake Village, CA: June 2, 2008.
TA–W–71,368; IAC Canton, LLC, Canton, OH: June 22, 2008.
TA–W–71,681; IAC Springfield, LLC, Springfield, TN: July 13, 2008.
TA–W–71,693; Ceco Building Systems, Robertson-CECO II Corp. Div., CPI Group, Columbus, MS: July 16, 2008.
TA–W–71,697; Federal-Mogul, Summerton, NC: July 15, 2008.
TA–W–71,805; Autosplice, Inc., Select Temporary Services, Payrolling, San Diego, CA: July 23, 2008.
TA–W–71,958; Indiana Mills and Manufacturing, Inc., Leased Workers from Nova/Link D.S.A. Rivercross, Westfield, IN: August 7, 2008.
TA–W–71,969; Shaw Process Fabricators Inc., West Monroe, LA: August 7, 2008.
TA–W–72,038; ASM America, Inc., ASM International N.V./Leased Workers from ADECCO Engineering, Phoenix, AZ: August 13, 2008.
TA–W–72,157; Risdon International Inc., Laconia, NH: August 27, 2008.
TA–W–72,201; Metaldyne, Chassis Division/Leased Workers From A& R Staffing, Whitsett, NC: September 1, 2008.
TA–W–72,213; Yale Lift-Technologies, Columbus Mckinnon Corporation, Muskegon, MI: September 3, 2008.
TA–W–72,314; Air System Components, DmDickason Personnel, El Paso, TX: June 1, 2009.
TA–W–72,392; Standard Motor Products, Leased Workers Express Employment, Independence, KS: September 22, 2008.
TA–W–72,402; Appleton Electric, EGS Electrical Group Division/Leased Worker of Advance Services, Columbus, NE: September 21, 2008.
TA–W–72,511; Durbin Industrial Valve, Inc., Leased Workers from CPR Staffing, Inc., Akron, OH: September 21, 2008.
TA–W–72,342; Federal Signal Corporation, Safety & Signal,

Support Shop Wire, Printed Circuits, University Park, IL: September 17, 2008.

TA–W–72,385; Greyhound Lines, Inc., A Business Unit of First Group America, Dallas, TX: September 22, 2008.

TA–W–70,215; Anthem, Division of Schawk, Inc., Creative Group, etc, Mount Olive, NJ: May 18, 2008.

TA–W–70,312; Alcatel Lucent, Research and Development, Optics Division, Westford, MA: May 19, 2008.

TA–W–70,908; Rohm and Haas Company, Ltd, Transportation Unit, Technical Services, West Alexandria, OH: May 19, 2008.

TA–W–71,090A; Avaya, Inc., Worldwide Services Group, Global Support Services (GSS) Organization, Highlands Ranch, CO: June 2, 2008.

TA–W–71,090; Avaya, Inc., Worldwide Services Group, Global Support Services (GSS) Organization, Westminster, CO: June 2, 2008.

TA–W–71,162; Husky Injection Molding Systems, Inc., Leased Workers From Selective Staffing, AP Professionals, Cheektowaga, NY: June 10, 2008.

TA–W–71,391; Aero Metric, Inc., Sheboygan, WI: June 23, 2008.

TA–W–71,721; Hewlett Packard (HP), Personal Systems Group- DTO Workstations, VMC, Sogeti, Fort Collins, CO: July 16, 2008.

TA–W–71,787; Thales Avionics, Inc., Aerospace Services Worldwide Div./Office Team, Seattle, WA: July 17, 2008.

TA–W–71,893; Open Solutions, Inc., Appleone and Banc Force, Murrieta, CA: July 3, 2008.

TA–W–72,073; Spherion Corporation, Working at IBM Outsourcing, Mechanicsburg, PA: August 17, 2008.

TA–W–71,231; International Color Services, Scottsdale, AZ: June 9, 2008.

TA–W–71,645; Avery Dennison Retail Information Services, LLC, Centralized Accounting Services Group/Leased Workers of Express Services, Miamisburg, OH: July 10, 2008.

TA–W–71,889; Marsh USA, Inc., NA Controllership Division, Chicago, IL:

The following certifications have been issued. The requirements of Section 222(b) (adversely affected workers in public agencies) of the Trade Act have been met.

None.

The following certifications have been issued. The requirements of Section 222(c) (supplier to a firm whose workers are certified eligible to apply for TAA) of the Trade Act have been met.

TA–W–70,030; Pittsburg Glass Works, LLC, Plant No. 23, Belcan TechServices, Securitas, Evart, MI: May 18, 2009.

TA–W–70,229; Stein Steel Mill Services, Stein, Inc., Broadview Heights, OH: May 19, 2008.

TA–W–70,338; Rapid-Line, Inc., Leased Workers from Ameritemp Staffing, Wyoming, MI: May 18, 2008.

TA–W–70,436; Dura Automotive Systems, Inc., Control Systems Division/Leased Workers from Randstad Inhouse Services, Gordonsville, TN: May 20, 2008.

TA–W–70,672; Thyssen Krupp Waupaca, Inc., Waupaca, WI: May 27, 2008.

TA–W–71,232; Norandal USA, Inc., Huntingdon Div., Manpower, Huntingdon, TN: June 15, 2008.

TA–W–71,396; Mat Nuwood, Lenoir, NC: June 24, 2008.

TA–W–71,703; Alpha Carb Enterprises, Leechburg, PA: July 15, 2008.

TA–W–71,732; Mills Products, Inc., Athens, TN: July 17, 2008.

TA–W–71,847; Technical Machining Services, Inc., Lincoln, RI: July 27, 2008.

TA–W–72,098; JTEKT Automotive Virginia, Inc., Div. of JTEKT North America, Leased Workers of Adecco North America, LLC, Daleville, VA: August 20, 2008.

TA–W–70,546; Axcelis Technologies, Global Customer Operations Division, Portland, OR: May 19, 2008.

TA–W–70,657; Lam Research, Boise, ID: May 27, 2008.

TA–W–72,301; Office Furniture Group Shared Services, Leased Workers from Action Inc. and Personnel Mgmt Inc., Jasper, IN: September 14, 2008.

TA–W–72,566; W.T. Sewing, Inc., San Francisco, CA: October 12, 2008.

The following certifications have been issued. The requirements of Section 222(c) (downstream producer for a firm whose workers are certified eligible to apply for TAA) of the Trade Act have been met.

None.

The following certifications have been issued. The requirements of Section 222(f) (firms identified by the International Trade Commission) of the Trade Act have been met.

TA–W–71,267; Michelin North America, Inc., BFGoodrich Tire Manufacturing Div., Manpower, Rusk, Opelika, AL: June 25, 2008.

Negative Determinations for Worker Adjustment Assistance

In the following cases, the investigation revealed that the eligibility criteria for worker adjustment assistance have not been met for the reasons specified.

The investigation revealed that the criterion under paragraph (a)(1), or (b)(1), or (c)(1) (employment decline or threat of separation) of section 222 has not been met.

TA–W–72,248; Manufacturers Services Industries, Inc., Flint, MI.

The investigation revealed that the criteria under paragraphs (a)(2)(A)(i) (decline in sales or production, or both) and (a)(2)(B) (shift in production or services to a foreign country) of section 222 have not been met.

TA–W–71,987; Columbia Gas Transmission, LLC, Sugar Grove, OH.

The investigation revealed that the criteria under paragraphs (a)(2)(A) (increased imports) and (a)(2)(B) (shift in production or services to a foreign country) of section 222 have not been met.

TA–W–70,249; US Technology Marine Services, Fort Smith, AR.

TA–W–70,359; Firestone Building Products Company, Prescott, AR.

TA–W–70,416; Lennox Industries, Inc., North American Parts Center, Urbandale, IA.

TA–W–70,466; DMAX, LTD, LLC, General Motors and Isuzu, Dayton, OH.

TA–W–70,499; Ascend Performance Materials, LLC, Formerly Solutia, Inc., Greenwood, SC.

TA–W–70,516; Lamb Assembly and Test, LLC, MAG Industrial Automation Systems, Machesney Park, IL.

TA–W–70,661; IAC Fremont, LLC, Fremont, OH.

TA–W–70,894; Marathon Equipment Company, Clearfield, PA.

TA–W–71,014; Jeld-Wen, Inc., Hawkins Window Division/Leased Workers of Nicolet Staffing, Hawkins, WI.

TA–W–71,944; St. Marys Pressed Metals, Ridgway, PA.

TA–W–71,973; IDA, Inc., Heron, MT.

TA–W–72,104; Smithfield Packing, Inc., Elon Division, Elon College, NC.

TA–W–70,179; IC Bus, LLC, Navistar, Inc., Conway, AR.

TA–W–70,771; Seagate Technology, LLC, McAllen, TX.

TA–W–70,829; Schnadig Corporation, Belmont, MS.

TA–W–72,215; K-Mart, Store #4422, South Point, OH.

The investigation revealed that the criteria under paragraphs (b)(2) and

(b)(3) (public agency acquisition of services from a foreign country) of section 222 have not been met.

None.

The investigation revealed that criteria of Section 222(c)(2) has not been met. The workers' firm (or subdivision) is not a Supplier to or a Downstream Producer for a firm whose workers were certified as eligible to apply for TAA.

None.

I hereby certify that the aforementioned determinations were issued during the period of *October 19 through October 30, 2009.* Copies of these determinations are available for inspection in Room N–5428, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210, during normal business hours or will be mailed to persons who write to the above address.

Dated: December 2, 2009.

Elliott S. Kushner

Certifying Officer, Division of Trade Adjustment Assistance.

[FR Doc. E9–29503 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

Notice of Determinations Regarding Eligibility To Apply for Worker Adjustment Assistance

In accordance with Section 223 of the Trade Act of 1974, as amended (19 USC 2273) the Department of Labor herein presents summaries of determinations regarding eligibility to apply for trade adjustment assistance for workers by (TA–W) number issued during the period of *October 5 through October 16, 2009.*

In order for an affirmative determination to be made for workers of a primary firm and a certification issued regarding eligibility to apply for worker adjustment assistance, each of the group eligibility requirements of Section 222(a) of the Act must be met.

I. Under Section 222(a)(2)(A), the following must be satisfied:

(1) A significant number or proportion of the workers in such workers' firm have become totally or partially separated, or are threatened to become totally or partially separated;

(2) The sales or production, or both, of such firm have decreased absolutely; and

(3) One of the following must be satisfied:

(A) Imports of articles or services like or directly competitive with articles produced or services supplied by such firm have increased;

(B) Imports of articles like or directly competitive with articles into which one or more component parts produced by such firm are directly incorporated, have increased;

(C) Imports of articles directly incorporating one or more component parts produced outside the United States that are like or directly competitive with imports of articles incorporating one or more component parts produced by such firm have increased;

(D) Imports of articles like or directly competitive with articles which are produced directly using services supplied by such firm, have increased; and

(4) The increase in imports contributed importantly to such workers' separation or threat of separation and to the decline in the sales or production of such firm; or

II. Section 222(a)(2)(B) all of the following must be satisfied:

(1) A significant number or proportion of the workers in such workers' firm have become totally or partially separated, or are threatened to become totally or partially separated;

(2) One of the following must be satisfied:

(A) There has been a shift by the workers' firm to a foreign country in the production of articles or supply of services like or directly competitive with those produced/supplied by the workers' firm;

(B) There has been an acquisition from a foreign country by the workers' firm of articles/services that are like or directly competitive with those produced/supplied by the workers' firm; and

(3) The shift/acquisition contributed importantly to the workers' separation or threat of separation.

In order for an affirmative determination to be made for adversely affected workers in public agencies and a certification issued regarding eligibility to apply for worker adjustment assistance, each of the group eligibility requirements of Section 222(b) of the Act must be met.

(1) A significant number or proportion of the workers in the public agency have become totally or partially separated, or are threatened to become totally or partially separated;

(2) The public agency has acquired from a foreign country services like or directly competitive with services which are supplied by such agency; and

(3) The acquisition of services contributed importantly to such workers' separation or threat of separation.

In order for an affirmative determination to be made for adversely affected secondary workers of a firm and a certification issued regarding eligibility to apply for worker adjustment assistance, each of the group eligibility requirements of Section 222(c) of the Act must be met.

(1) A significant number or proportion of the workers in the workers' firm have become totally or partially separated, or are threatened to become totally or partially separated;

(2) The workers' firm is a Supplier or Downstream Producer to a firm that employed a group of workers who received a certification of eligibility under Section 222(a) of the Act, and such supply or production is related to the article or service that was the basis for such certification; and

(3) Either—

(A) the workers' firm is a supplier and the component parts it supplied to the firm described in paragraph (2) accounted for at least 20 percent of the production or sales of the workers' firm; or

(B) a loss of business by the workers' firm with the firm described in paragraph (2) contributed importantly to the workers' separation or threat of separation.

In order for an affirmative determination to be made for adversely affected workers in firms identified by the International Trade Commission and a certification issued regarding eligibility to apply for worker adjustment assistance, each of the group eligibility requirements of Section 222(f) of the Act must be met.

(1) The workers' firm is publicly identified by name by the International Trade Commission as a member of a domestic industry in an investigation resulting in—

(A) An affirmative determination of serious injury or threat thereof under section 202(b)(1);

(B) An affirmative determination of market disruption or threat thereof under section 421(b)(1); or

(C) An affirmative final determination of material injury or threat thereof under section 705(b)(1)(A) or 735(b)(1)(A) of the Tariff Act of 1930 (19 U.S.C. 1671d(b)(1)(A) and 1673d(b)(1)(A));

(2) The petition is filed during the 1-year period beginning on the date on which—

(A) A summary of the report submitted to the President by the International Trade Commission under section 202(f)(1) with respect to the affirmative determination described in paragraph (1)(A) is published in the

Federal Register under section 202(f)(3); or

(B) Notice of an affirmative determination described in subparagraph (1) is published in the Federal Register; and

(3) The workers have become totally or partially separated from the workers' firm within—

(A) The 1-year period described in paragraph (2); or

(B) Notwithstanding section 223(b)(1), the 1-year period preceding the 1-year period described in paragraph (2).

Affirmative Determinations for Worker Adjustment Assistance

The following certifications have been issued. The date following the company name and location of each determination references the impact date for all workers of such determination.

The following certifications have been issued. The requirements of Section 222(a)(2)(A) (increased imports) of the Trade Act have been met.

TA–W–70,722; Marsh Furniture Company, Leased Workers from Graham and Associates, High Point, NC. May 28, 2008

TA–W–70,882; Diversified Systems, Inc., Printed Circuit Div./Leased Workers of Aerotek Commercial, Indianapolis, IN. June 2, 2008

TA–W–70,964; Yorktowne Cabinetry, Mifflinburg, PA. May 19, 2008

TA–W–71,178; Anderson Global, Inc., Muskegon Heights, MI. February 9, 2009

TA–W–71,287; Masco Builder Cabinet Group, Leased Workers from Reserves Network, Jackson, OH. June 11, 2008

TA–W–71,840A; Willstaff Staffing Agency and MDS Industrial Resources, Inc., Tyler Pipe Company/Waterworks Division, South Plant, Tyler, TX. July 28, 2008

TA–W–71,840; Tyler Pipe Company, Waterworks Division, South Plant, Tyler, TX. August 1, 2009

TA–W–72,300; National Office Furniture-Fordsville, Leased Workers from Manpower, Fordsville, KY. September 14, 2008

TA–W–72,492; Adams Granite Company, Inc., Barre, VT. October 2, 2008

TA–W–71,686A; RM International, Inc., Madras, OR. July 14, 2008

TA–W–71,686; RM International, Inc., Portland, OR. July 14, 2008

TA–W–70,682; The Magnus Group, Inc, Progressive Information Technologies, Off-Site Workers in Rochester NY, Emigsville, PA. May 26, 2008

TA–W–72,127; Wintersleiger, Inc., Seedmech Division, Colwich, KS. August 25, 2008

TA–W–70,075; Colorite Specialty Resins, A Subsidiary of Tekni-Plex, Burlington, NJ. May 18, 2008

TA–W–70,172; Midwest Tool and Die Corporation, Fort Wayne, IN. May 18, 2008

TA–W–70,422; Wyoming Sawmills, Inc., Sheridan, WY. May 19, 2008

TA–W–70,505; ArcelorMittal Lackawanna LLC, Blasdell, NY. May 18, 2008

TA–W–70,538; Barber Brake Beam, LLC, A Subsidiary of Wabtec Corporation, Saint Joseph, MI. May 19, 2008

TA–W–70,570; Unilin Flooring NC, LLC, A Subsidiary of Mohawk Industries, Melbourne, AR. May 20, 2008

TA–W–70,600; Klaussner Furniture of California, Inc, La Mirada, CA. May 22, 2008

TA–W–70,607; Penguin, LLC, Sturgis, MI. May 20, 2008

TA–W–70,637; Pandora Manufacturing, LLC, Leased Workers From Allstaff, Spherion, Pandora, OH. May 20, 2008

TA–W–70,790; Matrix Tool, Inc., Mishawaka, IN. May 21, 2008

TA–W–70,940; Ray Lewis and Son, Marysville, OH. May 18, 2008

TA–W–70,978; Pace Industries, LLC, Auburn Division/Leased Workers of Employment Resources, Auburn, AL. June 2, 2008

TA–W–71,454; American Hollow Boring Company, Inc., Erie, PA. June 26, 2008

TA–W–71,872; Fraser Papers LTD, Leased Workers of Tempo Employment Services, Madawaska, ME. August 10, 2009

TA–W–71,934; Clarcor Air Filtration Products, Inc., Leased Workers of The Work Connection, Campbellsville, KY. August 5, 2008

TA–W–72,083; Hutchinson Technology, Inc., Sioux City Plant, Sioux Falls, SD. August 19, 2008

TA–W–72,102; E. R. Wagner Manufacturing, Casters and Wheels Division, Hustisford, WI. August 21, 2008

TA–W–70,616; Aleris International, Leased Workers of Temporary Professionals, Malone Associates, Lewisport, KY. May 26, 2008

TA–W–70,168A; True Textiles, Inc., New York, NY. May 18, 2008

TA–W–70,168; True Textiles, Inc., Lancaster, SC. May 18, 2008

TA–W–70,233; Pine Hosiery Mills, Inc., Star, NC. May 19, 2008

TA–W–70,817; Hill's Family Corporation, Leased Workers From Remx Temporary Agency, Anaheim, CA. May 28, 2008

TA–W–71,513A; DeLong Sportswear, Corporate Office, Grinnell, IA. June 30, 2008

TA–W–71,513B; DeLong Sportswear, Manufacturing Facility, Grinnell, IA. June 30, 2008

TA–W–71,513; DeLong Sportswear, Warehouse and Support Facility, Grinnell, IA. June 30, 2008

TA–W–71,964A; DeLong Sportswear, Manufacturing Facility, Albia, IA. July 9, 2008

TA–W–71,964; DeLong Sportswear, Manufacturing Facility, Atlantic, IA. July 9, 2008

The following certifications have been issued. The requirements of Section 222(a)(2)(B) (shift in production or services) of the Trade Act have been met.

TA–W–72,144; Cummins Filtration, Leased Workers from Manpower, Lake Mills, IA. August 26, 2008

TA–W–70,190; Taylor-Wharton International, LLC, Sherwood Valve LLC, Leased Workers from Belcan Staffing, Washington, PA. May 18, 2008

TA–W–70,228; Johnson Controls, Inc., Greenfield, OH. May 19, 2008

TA–W–70,242A; Findlay Industries, Inc., Springfield Division, Springfield, OH. May 19, 2008

TA–W–70,242; Findlay Industries, Inc., Findlay Ohio Plant One, Findlay, OH. May 19, 2008

TA–W–70,290; Avery Dennison IBMB, Retail Information Services, Leased Workers of Staffmark, Rock Hill, SC. May 19, 2008

TA–W–70,394; Multi-Plastic of New Mexico, Inc., Leased Workers from Manpower, Inc. and RM Personnel, Inc., Las Cruces, NM. May 20, 2008

TA–W–70,448; Jabil Circuit, Inc., Electronics Materials Services Division, Leased Workers From Nextsources, Billerica, MA. May 18, 2008

TA–W–70,479; Air Products and Chemicals, Leased Workers From Covenant Security, Star Building Services, Easton, PA. May 21, 2008

TA–W–70,533; Edscha North America, Inc. (Formerly known as Edscha Jackson, Inc.), Centerpoint Administrative Offices, Pontiac, MI. May 18, 2008

TA–W–70,711; Thermo EGS Gauging, Inc., Thermo Fisher Scientific, Wilmington, MA. May 21, 2008

TA–W–70,758; Kulicke and Joffa Industries, Corporate Office, Fort Washington, PA. May 22, 2008

TA–W–71,026; Edscha Roof Systems, Pontiac, MI. June 3, 2008

TA–W–71,122; Masimo, Leased Workers from Volt, Apple One, and Pacific Technical Search, Irvine, CA. June 8, 2008

TA–W–71,165; Darly Custom Technology, Inc., Bloomfield, CT. June 10, 2008

TA–W–71,226; Tempel Steel Company, Leased from Aerotek Staffing, Chicago, IL. June 15, 2008

TA–W–71,330; Siemens Building Technologies, Inc., Leased Workers of Spherion Staffing Services, Florham Park, NJ. June 22, 2008

TA–W–71,343; Metso Minerals Industries, Inc., Lease Workers from Executive Staffing, Columbia, SC. June 22, 2008

TA–W–71,380A; Seagate Technology, Leased Workers from Spherion and Workforce Logic, Shakopee, MN. June 23, 2008

TA–W–71,380; Seagate Technology, LLC, Shakopee, MN. May 19, 2009

TA–W–71,520; USP Holding Corporation—dba US Products, Nilfisk-Advance, Leased Workers of Aerotek Company, Coeur d'Alene, ID. July 1, 2008

TA–W–71,526; Cinram Incorporated, Leased Workers of Manpower, Richmond, IN. June 30, 2008

TA–W–71,707; Hella Lighting Corporation, Leased Workers from Reliance One, Inc., York, SC. July 14, 2008

TA–W–71,760; Fair-Rite Products Corporation, Flat Rock, IL. June 15, 2009

TA–W–71,927; Irwin Industrial Tool, DeWitt, NE. September 1, 2009

TA–W–71,931A; AMETEK Vehicular Instrumentation Systems, Leased Workers from Express Employment Professionals, Grand Junction, CO. August 5, 2008

TA–W–71,931; AMETEK Vehicular Instrumentation Systems, Instrumentation and Specialty Controls, Leased Workers from SOS Staffing, Grand Junction, CO. August 16, 2009

TA–W–71,937; Huf North America, Huf Hulsbeck and Furst GMBH and Company KG, Leased Workers Staff Pro, Greeneville, TN. August 5, 2008

TA–W–71,938; GPSG, Unit of Ortho-McNeil-Janssen, Pharmaceuticals, Inc., Leased Workers of Kelly Temporary Agency, Raritan, NJ August 5, 2008

TA–W–71,957; Ametek, Inc., National Controls Corp., Instrumental and Leased Workers of Staff Force, West Chicago, IL. August 6, 2008

TA–W–71,970; SAIA–Burgess Holding Inc., Johnson Electric Division, Vandalia, OH. August 10, 2008

TA–W–72,003; Perry Slingsby Systems, Inc., Leased Workers from Aerotek, TR Launay, and Blue Laguna, Jupiter, FL. August 6, 2008

TA–W–72,023A; Micron Technology, Inc., Leased Workers Allied Barton, Allied, Applied Materials, Bledsoe, DNS, GCA, Boise, ID. August 11, 2008

TA–W–72,023B; Spectek, A Subsidiary of Micron Technology, Inc., Nampa, ID. September 14, 2009

TA–W–72,023C; Spectek, Micron Technology, Leased Workers Silicon Mountain Contract and Allied Barton, Nampa, ID. August 11, 2008

TA–W–72,023; Micron Technology, Inc., Boise, ID. September 14, 2009

TA–W–72,033; Albany International Corporation, Leased Workers from Randstad, Portland, TN. August 13, 2008

TA–W–72,086; Comfil Farr, Shawnee, OK. August 10, 2008

TA–W–72,158; Vital Diagnostics Inc., Vital Diagnostics Holding Corporation, Leased Workers from LG Professionals, Brea, CA. August 27, 2008

TA–W–72,161; Hokumo America Corporation, Hokumo Corporation Ltd., Bardentown, KY. August 18, 2008

TA–W–72,184; ABB, Inc., Power Products Medium Voltage, Leased Workers from Adecco, CSA, Global, Jmark, Lake Mary, FL. August 31, 2008

TA–W–72,192A; Delphi Packard Mississippi Operations, Packard E/EA, Brookehaven, MS. August 27, 2008

TA–W–72,192; Delphi Packard Mississippi Operations, Packard E/EA, Leased Workers from Securitas, Inc., Clinton, MS. August 27, 2008

TA–W–72,217; SAES Getters America, Inc., Cleveland, OH. September 2, 2008

TA–W–72,273; Top Eastern Drill (Formerly Kennametal, Inc.), Leased Workers from Mau, Manpower and Kelly Services, Evans, GA. September 1, 2008

TA–W–70,402; American and Efird, Inc., Ruddick Corporation/Gobal Supply Chain Operations, Gastonia, NC. May 19, 2008

TA–W–70,709; Horizon Hobby, Inc., Lost Division. Leased Workers of Unitech, Ontario, CA. May 18, 2008

TA–W–71,451; Doranco, Inc., Mansfield, MA. June 26, 2008

TA–W–70,319; Xerox Corporation, Leased Workers from Insight Global and Paladin Consulting, Lewisville, TX. May 18, 2008

TA–W–70,867; Convergys Corporation, Cincinnati, OH. May 28, 2008

TA–W–70,999; Moody's Analytics, Inc., On-Site Independent Contractors, South Bend, IN. June 4, 2008

TA–W–71,130; ACS Enterprise Solutions, Inc., Computer Services, Inc., East Syracuse, NY. May 21, 2008

TA–W–71,283; Wolters Kluwer Health, Inc., Pharma Solutions Business, Phoenix, AZ. June 12, 2008

TA–W–71,609; EDS, an HP Company/, Technology Solutions Group, Applications/Financial Services, Saint Charles, MO. July 2, 2008

TA–W–71,637; Stream Global Services, Inc., Sergeant Bluffs, IA. June 15, 2008

TA–W–71,810; Novell, Inc., Provo, UT. July 24, 2008

TA–W–71,823; Schawk Minneapolis, Minneapolis, MN. July 27, 2008

TA–W–71,914; Maersk Line, Sub. of A.P. Moller-Maersk Group, Leased Workers from Securitas, Sarcom, Remx, Charlotte, NC. August 3, 2008

TA–W–71,962; ConMed Electrosurgery, El Paso, TX. August 7, 2008

TA–W–72,062; Manpower, On-Site at IBM, Parts Sales Division and Parts Planning Division, Mechanicsburg, PA. August 6, 2008

TA–W–72,262; Imation Corporation, U.S. Customer Service Division, Leased Workers of Westaff, Oakdale, MN. September 9, 2008

TA–W–72,326; Managed Business Solutions, LLC, Working On-Site at Hewlett Packard, Farmington Hills, MI. September 15, 2008

TA–W–72,327; Managed Business Solutions, LLC, Working on-site at Hewlett Packard, Colorado Springs, CO. September 15, 2008

TA–W–70,659; Anthem Insurance Companies, Inc., Wellpoint, Inc., Louisville, KY. May 27, 2008

TA–W–71,220; Schering Corporation, Schering-Plough Corp., Information Technology, Leased Workers of IBM Corp. etc, Kenilworth, NJ. June 15, 2008

TA–W–71,244; Weekly Reader Corporation, The Reader's Digest Association, Inc., Pleasantville, NY. June 15, 2008

TA–W–71,499; Sara Lee Corporation, Leased Workers From EDS, Hewitt Packard, Sapphire Technology and Teksystems, Downers Grove, IL. June 30, 2008

The following certifications have been issued. The requirements of Section 222(b) (adversely affected workers in public agencies) of the Trade Act have been met.

None.

The following certifications have been issued. The requirements of Section 222(c) (supplier to a firm whose workers are certified eligible to apply for TAA) of the Trade Act have been met.

TA–W–70,158; Miller Welding and Machine Company, Brookville, PA. May 18, 2008

TA–W–70,794; American Appliance Products, Inc., A Subsidiary of SSW Holding Company, Inc., Newport, TN. May 18, 2008

TA–W–70,795; Emitec, Inc., Leased Workers from Marketplace Staffing and Ambassador Staffing, Fountain Inn, SC. May 26, 2008

TA–W–70,955; B and B Engineering, Medford, WI. June 2, 2008

TA–W–71,822; Parker Hannifin Corporation, Mobile Climate Systems Division, Lyons, NY. July 23, 2008

TA–W–71,888; Duffy Tool and Stamping, LLC, Leased Workers from Staffmark, Muncie, IN. July 29, 2008

TA–W–72,019; Superior Plastics, LLC, Rochester, MI. August 11, 2008

TA–W–72,156; West Allis Ductile Iron, A Sub. of Metal Technologies, Inc., Leased Workers from Sourcepoint Staffing, West Allis, WI. August 27, 2008

TA–W–72,182; Worthington Steel, Monroe Division, Monroe, OH. August 15, 2008

TA–W–72,242; Anchor Coupling, Inc., Leased Workers from Manpower, Chambersburg, PA. September 3, 2008

TA–W–70,033; Fielder Electric Motor Repair, Inc., Galax, VA. May 18, 2008

TA–W–70,288; Russell Brands, LLC, Russell Athletic Division, Atlanta, GA. May 18, 2009

TA–W–70,604; Accretech USA, Inc., Tokyo Seimitsu Co. Ltd, Boise, ID. May 18, 2008

The following certifications have been issued. The requirements of Section 222(c) (downstream producer for a firm whose workers are certified eligible to apply for TAA) of the Trade Act have been met.

TA–W–70,474; Samuel Steel Pickling Company, Twinsburg, OH. May 18, 2008

TA–W–71,173; Penske Logistics, LLC, A Subsidiary of Penske Truck Leasing Co., Leased Workers of Staffmark, Oxford, MS. June 11, 2008

TA–W–71,531; Newton Transportation Company, Inc., Leased Workers from Pad Leasing Associates, Hudson, NC. July 2, 2008

The following certifications have been issued. The requirements of Section 222(f) (firms identified by the International Trade Commission) of the Trade Act have been met.

TA–W–71,685; Goodyear Tire and Rubber Company, Akron Innovation Center Manufacturing, Akron Tech Center, Akron, OH. June 25, 2008

Negative Determinations for Worker Adjustment Assistance

In the following cases, the investigation revealed that the eligibility criteria for worker adjustment assistance have not been met for the reasons specified.

The investigation revealed that the criterion under paragraph (a)(1), or (b)(1), or (c)(1) (employment decline or threat of separation) of section 222 has not been met.

None.

The investigation revealed that the criteria under paragraphs (a)(2)(A)(i) (decline in sales or production, or both) and (a)(2)(B) (shift in production or services to a foreign country) of section 222 have not been met.

None.

The investigation revealed that the criteria under paragraphs(a)(2)(A) (increased imports) and (a)(2)(B) (shift in production or services to a foreign country) of section 222 have not been met.

TA–W–70,202; Eaton Corporation, Searcy, AR.

TA–W–70,444; Richland Manufacturing, Subsidiary of Eagle Wings Industries, Inc., Olney, IL.

TA–W–70,713; ConocoPhillips Company, Research and Development Group, Shared Services Division, Ponca City, OK.

TA–W–71,174; General Electric Company, Transportation Division, Erie, PA.

TA–W–71,251; Ancor Specialties, Hoeganaes Corporation, Ridgway, PA.

TA–W–71,757; Elkhart Brass Manufacturing Company, Inc., Shreve, OH.

TA–W–71,890; Camel MFG, Jamestown, TN.

TA–W–72,166; Gera Tool and Die Inc., St. Marys, PA.

TA–W–70,358; Eudora Garment Corporation, Eudora, AR.

TA–W–70,976; Job Works Inc., Fort Wayne, IN.

TA–W–71,089; Cowin and Company, Inc., Birmingham, AL.

TA–W–71,514; Lexington Home Brands, Lumber Yard Division, Thomasville, NC.

TA–W–71,776; Marion and Son Landscape Services LLC, Ararat, VA.

TA–W–71,858; Maritz Holdings, Inc., Maritz Learning, Fenton, MO.

TA–W–71,860; Cenveo Colorhouse, Minneapolis, MN.

TA–W–71,870; Highlander Energy Products Inc., Kane, PA.

TA–W–72,026; Pinnacle Airlines, Inc., Evansville, Indiana Division, Memphis, TN.

TA–W–70,047; Superior Fabrication Company, LLC, Kincheloe, MI.

The investigation revealed that the criteria under paragraphs (b)(2) and (b)(3) (public agency acquisition of services from a foreign country) of section 222 have not been met.

None.

The investigation revealed that criteria of Section 222(c)(2) has not been met. The workers' firm (or subdivision) is not a Supplier to or a Downstream Producer for a firm whose workers were certified as eligible to apply for TAA.

None.

I hereby certify that the aforementioned determinations were issued during the period of *October 5 through October* 16, 2009. Copies of these determinations are available for inspection in Room N–5428, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210 during normal business hours or will be mailed to persons who write to the above address.

Dated: December 4, 2009.

Elliott S. Kushner,

Certifying Officer, Division of Trade Adjustment Assistance.

[FR Doc. E9–29504 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–70,466]

DMAX, LTD, LLC; A Joint Venture Between General Motors and Isuzu Dayton, OH; Notice of Negative Determination Regarding Application for Reconsideration

By application dated November 6, 2009, International Union of Electronic, Electrical, Salaried, Machine and Furniture Workers—Communications Workers of America (IUE–CWA), Local 755 requested administrative reconsideration of the Department's negative determination regarding eligibility to apply for Trade Adjustment Assistance (TAA), applicable to workers and former workers of the subject firm. The denial notice was signed on October 29, 2009 and will soon be published in the **Federal Register**.

Pursuant to 29 CFR 90.18(c) reconsideration may be granted under the following circumstances:

(1) If it appears on the basis of facts not previously considered that the determination complained of was erroneous;

(2) If it appears that the determination complained of was based on a mistake in the determination of facts not previously considered; or

(3) If in the opinion of the Certifying Officer, a misinterpretation of facts or of the law justified reconsideration of the decision.

The initial investigation resulted in a negative determination, based on the finding that imports of light duty diesel engines did not contribute to worker separations at the subject facility and there was no shift in production from the subject firm to foreign country during the period under investigation.

The petitioner stated that General Motors is ''getting out of the light truck business'' and that the workers of the subject firm should be eligible for TAA due to the changes in the program.

The investigation revealed that workers of DMAX Ltd., LLC, Dayton, Ohio produced light duty diesel engines. The investigation also revealed that worker separations at the subject facility were not caused by increased imports of light duty diesel engines into the United States nor by a shift in production of light duty diesel engines from the subject facility to a foreign country. DMAX, Ltd, LLC did not import light duty diesel engines and did not shift production abroad. The Department surveyed subject firm's major customer regarding its purchases of light duty diesel engines in 2007, 2008, January through May 2008 and January through May 2009. The survey revealed no imports during the relevant period.

The petitioner did not supply facts not previously considered; nor provide additional documentation indicating that there was either (1) a mistake in the determination of facts not previously considered or (2) a misinterpretation of facts or of the law justifying reconsideration of the initial determination.

After careful review of the request for reconsideration, the Department determines that 29 CFR 90.18(c) has not been met.

Conclusion

After review of the application and investigative findings, I conclude that there has been no error or misinterpretation of the law or of the facts which would justify reconsideration of the Department of Labor's prior decision. Accordingly, the application is denied.

Signed in Washington, DC, this 2nd day of December, 2009.

Elliott S. Kushner,

Certifying Officer, Division of Trade Adjustment Assistance.

[FR Doc. E9–29500 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

DEPARTMENT OF LABOR

Employment and Training Administration

[TA–W–70,406]

Greenville Metals, Inc., Powder Division, Transfer, PA; Notice of Revised Determination on Reconsideration

On October 20, 2009, the Department issued an Affirmative Determination Regarding Application for Reconsideration applicable to workers and former workers of the subject firm. The notice was published in the **Federal Register** on November 5, 2009 (74 FR 57333).

The initial investigation initiated on May 22, 2009, resulted in a negative determination issued on September 28, 2009, was based on the finding that imports of powdered metals did not contribute importantly to worker separations at the subject firm and no shift in production to a foreign source occurred. The denial notice was published in the **Federal Register** on November 17, 2009 (74 FR 59255).

On reconsideration, the Department requested additional information from the subject firm's largest customer to determine whether imports of powdered metals negatively impacted employment at the subject firm.

The survey of the major declining customer revealed that the customer directly incorporated powdered metals purchased from the subject firm into powdered core. The investigation further revealed that the largest customer shifted purchases of powdered metals from the subject firm to sources in South East Asia in September 2008. Furthermore, this customer increased its imports of powdered core containing foreign-manufactured powdered metals during the relevant period and this increase in imports contributed importantly to the workers' separation at Greenville Metals, Inc., Powder Division, Transfer, Pennsylvania.

The investigation also revealed that sales, production and employment at the subject firm declined during the relevant period.

Conclusion

After careful review of the additional facts obtained on reconsideration, I determine that workers of Greenville Metals, Inc., Powder Division, Transfer, Pennsylvania, who are engaged in activities related to the production of powdered metals meet the worker group certification criteria under Section 222(a) of the Act, 19 U.S.C. 2272(a). In accordance with Section 223 of the Act, 19. U.S.C. 2273, I make the following certification:

All workers of Greenville Metals, Inc., Powder Division, Transfer, Pennsylvania, who became totally or partially separated from employment on or after May 19, 2008, through two years from the date of this certification, and all workers in the group threatened with total or partial separation from employment on date of certification through two years from the date of certification, are eligible to apply for adjustment assistance under Chapter 2 of Title II of the Trade Act of 1974, as amended.

Signed in Washington, DC, this 24th day of November 2009.

Elliott S. Kushner,

Certifying Officer, Division of Trade Adjustment Assistance.

[FR Doc. E9–29512 Filed 12–10–09; 8:45 am]

BILLING CODE 4510–FN–P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (09–107)]

Government-Owned Inventions, Available for Licensing

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of Availability of Inventions for Licensing.

SUMMARY: Patent applications on the inventions listed below assigned to the National Aeronautics and Space Administration, have been filed in the United States Patent and Trademark Office, and are available for licensing.

DATES: December 11, 2009.

FOR FURTHER INFORMATION CONTACT: Mark W. Homer, Patent Counsel, NASA Management Office—JPL, 4800 Oak Grove Drive, Mail Stop 180–200, Pasadena, CA 91109; telephone (818) 354–7770.

NASA Case No.: NPO–45948–1: Monolithic Afocal Telescope;

NASA Case No.: NPO–45911–1: Method to Improve Indium Bump bonding Via Indium Oxide Removal Using a Multi-Step Plasma Process;

NASA Case No.: NPO–46843–1: Metal Patch Antenna;

NASA Case No.: DRC–009–013: Smart Material Coated Fiber Bragg Grating Sensors.

Dated: December 4, 2009.

Richard W. Sherman,

Deputy General Counsel.

[FR Doc. E9–29529 Filed 12–10–09; 8:45 am]

BILLING CODE P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (09–109)]

Government-Owned Inventions, Available for Licensing

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of Availability of Inventions for Licensing.

SUMMARY: Patent applications on the inventions listed below assigned to the National Aeronautics and Space Administration, have been filed in the United States Patent and Trademark Office, and are available for licensing.

DATES: December 11, 2009.

FOR FURTHER INFORMATION CONTACT: Randy Heald, Patent Counsel, Kennedy Space Center, Mail Code CC–A, Kennedy Space Center, FL 32899; telephone (321) 867–7214; fax (321) 867–1817.

NASA Case No. KSC–12878–1: Zero-Valent Metallic Treatment System and its Application for Removal of and Remediation of Polychlorinated Bipheryls (PCBs);

NASA Case No. KSC–12703: Integral Battery Power Limiting Circuit for Intrinsically Safe Applications.

Dated: December 4, 2009.

Richard W. Sherman,

Deputy General Counsel.

[FR Doc. E9–29539 Filed 12–10–09; 8:45 am]

BILLING CODE 7510–13–P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (09–108)]

Government-Owned Inventions, Available for Licensing

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of availability of inventions for licensing.

SUMMARY: The inventions listed below assigned to the National Aeronautics and Space Administration, have been filed in the United States Patent and Trademark office, and are available for licensing.

DATES: December 11, 2009.

FOR FURTHER INFORMATION CONTACT: Edward K. Fein, Patent Counsel, Johnson Space Center, Mail Code AL, 2101 NASA Parkway, Houston, TX 77058, (281) 483–4871; (281) 483–6936 [Facsimile].

NASA Case No. MSC–24464–1: Methods and Circuitry for Reconfigurable SEU/SET Tolerance;

NASA Case No. MSC–23797–1: Cell-Based Biosensors and Uses Thereof.

Dated: December 4, 2009.

Richard W. Sherman,

Deputy General Counsel.

[FR Doc. E9–29492 Filed 12–10–09; 8:45 am]

BILLING CODE P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (09–106)]

Government-Owned Inventions, Available for Licensing

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of availability of inventions for licensing.

SUMMARY: Patent applications on the inventions listed below assigned to the National Aeronautics and Space Administration, have been filed in the United States Patent and Trademark Office, and are available for licensing.

DATES: December 11, 2009.

FOR FURTHER INFORMATION CONTACT: Bryan A. Geurts, Patent Counsel, Goddard Space Flight Center, Mail Code 140.1, Greenbelt, MD 20771–0001; telephone (301) 286–7351; fax (301) 286–9502.

NASA Case No. GSC–15584–1: Systems, Computer-Implemented Methods, and Tangible Computer-Readable Storage Media for Wide-Field Interferometry;

NASA Case No. GSC–15583–1: Tunable Frequency-Stabilized Laser via Offset Sideband;

NASA Case No. GSC–15538–1: Compact Planar Microwave Blocking Filters;

NASA Case No. GSC–15678–1: Optimal Padding for the Two-Dimensional Fast Fourier Transform;

NASA Case No. GSC–15684–1: Discrete Fourier Transform (DFT) Analysis for Applications Using Iterative Transform Methods;

NASA Case No. GSC–15685–1: Sampling Theorem in Terms of the Bandwidth and Sampling Interval;

NASA Case No. GSC–15724–1: Passively Q–Switched Side Pumped Monolithic Ring Laser;

NASA Case No. GSC–15758–1: Hybrid Architecture Active Wavefront Sensing and Control System and Method;

NASA Case No. GSC–15552–1: High Field Superconducting Magnets;

NASA Case No. GSC–15716–1: Digital Radar Systems and Methods;

NASA Case No. GSC–15527–1: Methods of Determining Complete Sensor Requirements for Autonomous Mobility;

NASA Case No. GSC–15699–1: Low Temperature Radiometer;

NASA Case No. GSC–15655–1: Step Frequency Isar;

NASA Case No. GSC–15550–1: Method of Improving System Performance and Survivability Through Self-Sacrifice;

NASA Case No. GSC–15662–1: Systems and Methods for Mirror Mounting with Minimized Distortion;

NASA Case No. GSC–15693–1: Variable Sample Mapping Algorithm;

NASA Case No. GSC–15760–1: Radiation-Hardened Hybrid Processor;

NASA Case No. GSC–15771–1: High Precision Electric Gate for Time-Of-Flight Ion Mass Spectrometers.

Dated: December 4, 2009.

Richard W. Sherman,

Deputy General Counsel.

[FR Doc. E9–29491 Filed 12–10–09; 8:45 am]

BILLING CODE P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (09–110)]

Government-Owned Inventions, Available for Licensing

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of Availability of Inventions for Licensing.

SUMMARY: Patent applications on the inventions listed below assigned to the National Aeronautics and Space Administration, have been filed in the United States Patent and Trademark Office, and are available for licensing.

DATES: December 11, 2009.

FOR FURTHER INFORMATION CONTACT: Robin W. Edwards, Patent Counsel, Langley Research Center, Mail Code 141, Hampton, VA 23681–2199; telephone (757) 864–3230; fax (757) 864–9190.

NASA Case No. LAR–17240–1: Smart Image Enhancement Process;

NASA Case No. LAR–17655–1: Localized Decisions and Actions Determined from Communal Network of Observations in Order to Achieve Global Solution;

NASA Case No. LAR–17609–1: A Self-Stabilizing Byzantine-Fault-Tolerant

Clock Synchronization System and Method;
NASA Case No. LAR–17579–1: Wireless Chemical Sensor and Sensing Method for Use Therewith;
NASA Case No. LAR–17580–1: Wireless Chemical Sensor and Sensing Method for Use Therewith;
NASA Case No. LAR–17656–1: Directed Design of Experiments for Validating Probability of Detection Capability of a Testing System;
NASA Case No.: LAR–17695–1: Vapor-Barrier Vacuum Isolation System;
NASA Case No.: LAR–16599–1: Flexible Volumetric Structure;
NASA Case No.: LAR–17469–1: Micro Ring Grating Spectrometer with Adjustable Aperture;
NASA Case No.: LAR–17241–1: Devices and Methods for a Micro-Fresnel Zone Plate Optical Device;
NASA Case No.: LAR–17539–1: Eddy Current System and Method for Crack Detection;
NASA Case No.: LAR–17651–1: Domain Decomposition by the Advancing-Partition Method for Parallel Unstructured Grid Generation;
NASA Case No.: LAR–17425–1: Micro Spectrometer for Parallel Light and Method of Use;
NASA Case No.: LAR–17242–1: Arrayed Micro-Ring Spectrometer System and Method of Use;
NASA Case No.: LAR–17237–1: Apparatus and Method for Creating a Photonic Densely-Accumulated Ray-Point;
NASA Case No.: LAR–16571–3: Magnetic Field Response Sensor for Conductive Media;
NASA Case No.: LAR–17696–1: Asymmetric Dielectric Elastomer Composite Material;
NASA Case No.: LAR–17748–1: Method for Exfoliation of Hexagonal Boron Nitride;
NASA Case No.: LAR–16383–2: Electrically Conductive, Optically Transparent Polymer/Carbon Nanotube Composites;
NASA Case No.: LAR–17745–1: Electrically Conductive, Optically Transparent Polymer/Carbon Nanotube Composites and Process for Preparation Thereof;
NASA Case No.: LAR 17711–1: Wireless Electrical Device Using Open-Circuit Elements Having No Electrical Connections;
NASA Case No.: LAR–17585–1: Method for Purifying Biodiesel Fuel.

Dated: December 4, 2009.

Richard W. Sherman,

Deputy General Counsel.

[FR Doc. E9–29541 Filed 12–10–09; 8:45 am]

BILLING CODE 7510–13–P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (09–105)]

Government-Owned Inventions, Available for Licensing

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of Availability of Inventions for Licensing.

SUMMARY: Patent applications on the inventions listed below assigned to the National Aeronautics and Space Administration, have been filed in the United States Patent and Trademark Office, and are available for licensing.

DATES: December 11, 2009.

FOR FURTHER INFORMATION CONTACT: Kaprice L. Harris, Attorney Advisor, Glenn Research Center at Lewis Field, Code 500–118, Cleveland, OH 44135; telephone (216) 433–5754; fax (216) 433–6790.

NASA Case No.: LEW–17915–1: Secure Optical Communications Using Quantum Two-Photon Transparency Modulation Spectroscopy;
NASA Case No. LEW–18340–1: Offset Compound Gear Inline Two-Speed Drive;
NASA Case No. LEW–18356–1: Device for Measuring the Thermal Conductivity of Small, Highly Insulation Materials;
NASA Case No. LEW–18373–1: A Radio Frequency Tank Eigenmode Sensor for Propellant Quantity Gauging;
NASA Case No. LEW–18432–1: Addendum of Self-Aligned Ion Implant to Design and Processing of SiC High Temperature Transistors for Durable Operation Above 400 C;
NASA Case No. LEW–18461–1: Method and Circuit for In-Situ Health Monitoring of Solar Cells in Space;
NASA Case No. LEW–18486–1: Polyimide Aerogels with three Dimensional Cross-Linked Structure.

Dated: December 4, 2009.

Richard W. Sherman,

Deputy General Counsel.

[FR Doc. E9–29519 Filed 12–10–09; 8:45 am]

BILLING CODE P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (09–104)]

Government-Owned Inventions, Available for Licensing

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of Availability of Inventions for Licensing.

SUMMARY: Patent applications on the inventions listed below assigned to the National Aeronautics and Space Administration, have been filed in the United States Patent and Trademark Office, and are available for licensing.

DATES: December 11, 2009.

FOR FURTHER INFORMATION CONTACT: Robert M. Padilla, Patent Counsel, Ames Research Center, Code 202A–4, Moffett Field, CA 94035–1000; telephone (650) 604–5104; fax (650) 604–2767.

NASA Case No. ARC–16331–1: Prediction of Visual Acuity from Wavefront Aberrations;
NASA Case No. ARC–16334–1: Estimation of Alga Growth Stage and Lipid Content Growth Rate;
NASA Case No. ARC–16235–1: Aircraft System Modeling Error and Control Error.

Dated: December 4, 2009.

Richard W. Sherman,

Deputy General Counsel.

[FR Doc. E9–29521 Filed 12–10–09; 8:45 am]

BILLING CODE P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (09–103)]

Government-Owned Inventions, Available for Licensing

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of availability of inventions for licensing.

SUMMARY: Patent applications on the inventions listed below assigned to the National Aeronautics and Space Administration, have been filed in the United States Patent and Trademark Office, and are available for licensing.

DATES: December 11, 2009.

FOR FURTHER INFORMATION CONTACT: James J. McGroary, Patent Counsel, Marshall Space Flight Center, Mail Code LS01, Huntsville, AL 35812; telephone (256) 544–0013; fax (256) 544–0258.

NASA Case No. MFS–32761–1: Eddy Current Minimizing Flow Plug for Use in Flow Conditioning and Flow Metering;
NASA Case No. MFS–32604–1: Method and System for Control of Upstream Flowfields of Vehicle in Supersonic or Hypersonic Atmospheric Flight;
NASA Case No. MFS–32373–1: Moving-Article X–Ray Imaging System and Method for 3–D Image Generation;
NASA Case No.: MFS–32323–1: Sub-Pixel Spatial Resolution Wavefront Phase Imaging;

NASA Case No.: MFS–32615–1: Linear and/or Curvilinear Rail Mount System;

NASA Case No.: MFS–32558–1: Parallel Plate System for Collecting Data Used to Determine Viscosity.

Dated: December 4, 2009.

Richard W. Sherman,

Deputy General Counsel.

[FR Doc. E9–29544 Filed 12–10–09; 8:45 am]

BILLING CODE 7510–13–P

NATIONAL SCIENCE FOUNDATION

Alan T. Waterman Award Committee; Notice of Meeting

In accordance with the Federal Advisory Committee Act (Pub. L. 92–463, as amended), the National Science Foundation announces the following meeting:

NAME: Alan T. Waterman Award Committee, #1172.

DATE AND TIME: January 11, 2010, 8:30 a.m.–1:30 p.m.

PLACE: National Science Foundation, 4201 Wilson Blvd., Arlington, Virginia.

TYPE OF MEETING: Closed.

CONTACT PERSON: Ms. Mayra Montrose, Program Manager, Room 1282, National Science Foundation, 4201 Wilson Blvd, Arlington, VA 22230. Telephone: 703–292–8040.

PURPOSE OF MEETING: To provide advice and recommendations in the selection of the Alan T. Waterman Award recipient.

AGENDA: To review and evaluate nominations as part of the selection process for awards.

REASON FOR CLOSING: The nominations being reviewed include information of a personal nature where disclosure would constitute unwarranted invasions of personal privacy. These matters are exempt under 5 U.S.C. 552b(c)(6) of the Government in the Sunshine Act.

Dated: December 8, 2009.

Susanne Bolton,

Committee Management Officer.

[FR Doc. E9–29498 Filed 12–10–09; 8:45 am]

BILLING CODE 7555–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2008–0391]

Notice of Availability of Draft Environmental Impact Statement for the Lost Creek In-Situ Recovery (ISR) Project in Sweetwater County, WY; Supplement to the Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of Availability.

SUMMARY: Notice is hereby given that the U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment a draft Supplemental Environmental Impact Statement (SEIS) for the Lost Creek *In-Situ* Uranium Recovery (ISR) Project. By letter dated March 20, 2008, Lost Creek ISR, LLC (LCI), a wholly-owned subsidiary of UR–Energy USA, Inc. submitted an application to the NRC for a new source material license for the Lost Creek ISR Project, which LCI proposes to be located in the Great Divide Basin in Sweetwater County, Wyoming. LCI is proposing to recover uranium from the Lost Creek ISR Project site using the *in-situ* leach (also known as the *in-situ* recovery ISR) process.

The Atomic Energy Act of 1954, as amended by the Uranium Mill Tailings Radiation Control Act of 1978, authorizes the NRC to issue licenses for the possession and use of source material and byproduct material. These statutes require that NRC license facilities, including ISR operations, in accordance with NRC regulatory requirements to protect public health and safety from radiological hazards. Under the NRC's environmental protection regulations in the Code of Federal Regulations, Title 10, Part 51 (10 CFR Part 51), that implement the National Environmental Policy Act of 1969 (NEPA), preparation of an Environmental Impact Statement (EIS) or supplement to an EIS (SEIS) is required for issuance of a license to possess and use source material for uranium milling (see 10 CFR 51.20(b)(8)).

In June 2009, the NRC staff issued NUREG–1910, ''Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities'' (herein referred to as the GEIS). In the GEIS, NRC assessed the potential environmental impacts from the construction, operation, aquifer restoration, and decommissioning of an ISR facility located in four specific geographic regions of the western United States. The proposed Lost Creek ISR Project is located within the Wyoming West Uranium Milling Region identified in the GEIS. This draft SEIS supplements the GEIS and incorporates by reference relevant portions from the GEIS, and uses site-specific information from the applicant's license application and other independent sources to fulfill the requirements in 10 CFR 51.20(b)(8).

DATES: The public comment period on the draft SEIS begins with publication of this notice and continues until February 1, 2010. Written comments should be submitted as described in the **ADDRESSES** section of this notice. The NRC will consider comments received, or postmarked, after that date to the extent practical.

ADDRESSES: You may submit comments by any one of the following methods. Please include Docket ID NRC–2008–0391 in the subject line of your comments. Comments submitted in writing or in electronic form will be posted on the NRC Web site and on the Federal rulemaking Web site *http://www.regulations.gov.* Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed.

The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those persons that the NRC will not edit their comments to remove any identifying or contact information, and therefore, they should not include any information in their comments that they do not want publicly disclosed.

Federal Rulemaking Web site: Go to *http://www.regulations.gov* and search for documents filed under Docket ID NRC–2008–0391. Comments may be submitted electronically through this Web site. Address questions about NRC dockets to Carol Gallagher 301–492–3668; e-mail *Carol.Gallagher@nrc.gov.*

Mail comments to: Michael T. Lesar, Chief, Rulemaking and Directives Branch (RDB), Division of Administrative Services, Office of Administration, Mail Stop: TWB–05–B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, or by fax to RDB at (301) 492–3446. Comments can also be submitted electronically to the following address: *Lostcreekisrseis@nrc.gov.*

Publicly available documents related to this notice can be accessed using the following methods:

NRC's Public Document Room (PDR): The public may examine and have

copied, for a fee, publicly available documents at the NRC's PDR, Public File Area O1 F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland.

NRC's Agencywide Documents Access and Management System (ADAMS): Publicly available documents created or received at the NRC are available electronically at the NRC's Electronic Reading Room at *http://www.nrc.gov/reading-rm/adams.html.* From this page, the public can gain entry into ADAMS, which provides text and image files of NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's PDR reference staff at 1–800–397–4209, 301–415–4737, or by e-mail to *Pdr.Resource@nrc.gov.* The ''Environmental Impact Statement for the Lost Creek ISR Project in Sweetwater County, Wyoming—Supplement to the Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities'' is available electronically under ADAMS Accession Number ML093350051.

The draft SEIS for the Lost Creek ISR Project also may be accessed on the internet at *http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/* by selecting ''NUREG–1910.'' The draft SEIS will be a Supplement 3 to NUREG–1910. Additionally, a copy of the draft SEIS will be available at the following public libraries:

Sweetwater County Library, 300 North 1st Street East, Green River, Wyoming 82935, 307–875–8615.

Rock Springs Branch Library, 400 C Street, Rock Springs, Wyoming 82901, 307–352–6667.

Federal Rulemaking Web site: Public comments and supporting materials related to this notice can be found at *http://www.regulations.gov* by searching on Docket ID: NRC–2008–0391.

FOR FURTHER INFORMATION CONTACT: For information on environmental review process related to the draft SEIS for the Lost Creek Project, please contact Alan Bjornsen, Project Manager, Division of Waste Management and Environmental Protection (DWMEP), Mail Stop T–8F5, U.S. Nuclear Regulatory Commission, Washington, DC, 20555–001, by phone at 1 (800) 368–5642, extension 1195. For general or technical information associated with the safety and licensing of uranium milling facilities, please contact Stephen Cohen, Team Lead, Uranium Recovery Branch, DWMEP, Mail Stop T–8F5, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, by phone at 1 (800) 368–5642, extension 7182.

SUPPLEMENTARY INFORMATION: The Atomic Energy Act of 1954, as amended by the Uranium Mill Tailings Radiation Control Act of 1978, authorizes NRC to issue licenses for the possession and use of source material and byproduct material. These statutes require that NRC license facilities, including ISR operations, in accordance with NRC regulatory requirements to project public health and safety from radiological hazards. ISR uranium recovery facilities must meet NRC regulatory requirements in order to obtain this license to operate. Under the NRC's environmental protection regulations in Title 10, Part 51.20(b)(8) of the *Code of Federal Regulations* (10 CFR Part 51), which implements NEPA, issuance of a license to possess and use source material for uranium milling requires an EIS or a supplement to an EIS.

To fulfill this requirement, the NRC staff and its contractor, the Center for Nuclear Waste Regulatory Analyses, in cooperation with the Wyoming Department of Environmental Quality (Land Quality Division), issued in June 2009, NUREG–1910, ''Generic Environmental Impact Statement for In-Situ Uranium Milling Facilities'' (the GEIS). The GEIS assessed the potential environmental impacts associated with the construction, operation, aquifer restoration, and decommissioning of an ISR facility in four specific geographic areas of the western United States (U.S.). The proposed Lost Creek ISR Project is located in one such region, the Wyoming West Uranium Milling Region. The GEIS evaluated the range of potential impacts in the four geographic regions and evaluated whether the potential impact would be essentially the same for all ISR facilities or whether site-specific information and analysis would be required to determine the potential impacts. As such, the GEIS provides a starting point for the NRC's NEPA analyses for site-specific license applications for new ISR facilities, as well as for applications to renew or amend existing ISR licenses.

By letter dated March 20, 2008, Lost Creek ISR, LLC (LCI), a wholly-owned subsidiary of UR Energy USA, Inc., submitted an application to the NRC for a new source material license for the Lost Creek ISR Project, which LCI proposes to be located 24 km (15 mi) southwest of the Town of Bairoil, and 61 km (38 mi) northwest of the Town of Rawlins. The City of Rock Springs is located approximately 135 km (53 mi) to the southwest, and the City of Casper is located approximately 144 km (90 mi) to the northwest of the Lost Creek ISR Project site. Planned facilities associated with the proposed Lost Creek ISR Project include a central plant with uranium processing capabilities; six well fields with injection, production, and monitor wells, header houses, pipeline to connect the well fields with the central plant, and an access road network. The proposed license area consists of approximately 1709 ha (4220 ac) and is remotely located on private land with about 15 percent of the surface rights being administered by the State of Wyoming. The U.S. Department of Interior, Bureau of Land Management (BLM) administers surface rights for the major part (85 percent) of the proposed project area. As such, the NRC coordinated its environmental review with BLM to promote efficiencies in each agencies environmental review. This coordination was undertaken in tandem with developing a Memorandum of Understanding (MOU) with the BLM which establishes a cooperating agency status between the agencies. The MOU was finalized on November 30, 2009, and NRC plans to use it in the review of applications that are in their early stages. This will allow us to effectively integrate BLM as a cooperating agency into the review of future applications.

ISR facilities recover uranium from low grade ores that may not be economically recoverable by other methods. In the ISR process, a leaching agent (called a lixiviant), such as oxygen and sodium bicarbonate, is added to native groundwater for injection through wells into the subsurface ore body to dissolve the uranium. Before ISR operations can begin, the portion of the aquifer designated for uranium recovery must be exempted by the U.S. Environmental Protection Agency (EPA) from being an underground source of drinking water in accordance with the Safe Drinking Water Act (as implemented by EPA at 40 CFR 146.4). The injected solution, now containing the dissolved uranium, is pumped back (recovered) to the surface and sent to a processing plant, where ion exchange is used to separate the uranium from the solution. The ISR process also frees other metals and minerals from the host aquifer. As a result, operators of ISR facilities are required to restore the groundwater affected by operations. In the processing plant, the recovered uranium is concentrated into the product known as ''yellowcake.'' For the Lost Creek ISR project, the final product is a yellowcake ''slurry'', not dry yellowcake. The slurry from the Lost

Creek ISR Facility would be shipped to an intermediate uranium processing facility, before being sent to a uranium fuel conversion facility.

In this draft SEIS, the NRC staff has assessed the potential environmental impacts from the construction, operation, aquifer restoration, and decommissioning of the proposed Lost Creek ISR Project. In doing so, the NRC staff evaluated site-specific data and information from the Lost Creek ISR Project to determine if the LCI's proposed activities and the site characteristics were consistent with those evaluated in the GEIS. NRC then determined which relevant sections of, and impact conclusions in, the GEIS could be incorporated by reference. The NRC staff also determined if additional data or analysis was needed to assess the potential environmental impacts for a specific environmental resource area. The NRC staff documented its assessments and conclusions in the draft SEIS.

In addition to the action proposed by LCI, the NRC staff addressed the no-action alternative in the draft SEIS. Under this alternative, NRC would deny LCI's request to construct and operate an ISR facility at the Lost Creek ISR Project. The no-action alternative serves as a baseline for comparison of the potential environmental impacts.

Another alternative action considered in the draft SEIS was the addition of a yellowcake dryer in the central processing plant. This would process the slurry into a dry yellowcake, thereby eliminating the necessity of transporting the slurry to another facility for drying. The end result would be direct transport of the dry yellowcake to a uranium fuel processing facility.

The NRC staff also considered other alternatives but eliminated them from detailed analysis. Conventional mining/milling and conventional mining/heap leach processing are two potential methods of uranium recovery at the Lost Creek ISR Project. However, given the recognized more substantial environmental impacts of conventional mining (whether by open pit or underground techniques) and conventional milling or heap leach processing, these alternatives were not further considered. The NRC staff also evaluated alternative lixiviants (acid- and ammonia-based), alternative waste disposal methods, and alternative site locations within the proposed license area. For reasons discussed in the draft SEIS, these alternatives also were eliminated from further consideration.

This draft SEIS is being issued for public comment. The public comment period on the draft SEIS begins with publication of this notice and continues until February 1, 2010. Written comments should be submitted as described in the **ADDRESSES** section of this notice. The NRC will consider comments received or postmarked after that date to the extent practical.

Dated at Rockville, Maryland, this 4th day of December, 2009.

For the U.S. Nuclear Regulatory Commission.

Patrice M. Bubar,

Deputy Director, Environmental Protection and Performance Assessment Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs.

[FR Doc. E9–29547 Filed 12–10–09; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2009–0364]

Notice of Availability of Draft Supplemental Environmental Impact Statement for the Moore Ranch ISR Project in Campbell County, WY, Supplement to the Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of availability.

SUMMARY: Notice is hereby given that the U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment a Draft Supplemental Environmental Impact Statement (SEIS) for the Moore Ranch ISR Project in Campbell County, Wyoming, Supplement to the Generic Environmental Impact Statement for *In-Situ* Leach Uranium Milling Facilities. By letter dated October 2, 2007, Energy Metals Corporation, a wholly-owned subsidiary of Uranium One (Uranium One), submitted an application to the NRC for a new source material license for the proposed Moore Ranch ISR Project, located in the Power River Basin in Campbell County, Wyoming. Uranium One is proposing to recover uranium from the Moore Ranch site using the in-situ leach (also know as the in-situ recovery [ISR]) process.

The Atomic Energy Act of 1954, as amended by the Uranium Mill Tailings Radiation Control Act of 1978, authorize the NRC to issue licenses for the possession and use of source material and byproduct material. These statutes require that NRC license facilities, including ISR operations, are licensed in accordance with NRC regulatory requirements to protect public health and safety from radiological hazards. Under the NRC's environmental protection regulations in the Code of Federal Regulations, Title 10, Part 51 (10 CFR Part 51), that implement the National Environmental Policy Act of 1969 (NEPA), preparation of an environmental impact statement (EIS) or supplement to an EIS (SEIS) is required for issuance of a license to possess and use source material for uranium milling (see 10 CFR 51.20(b)(8)).

In June 2009, the NRC staff issued NUREG–1910, ''Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities'' (herein referred to as the GEIS). In the GEIS, NRC assessed the potential environmental impacts from the construction, operation, aquifer restoration, and decommissioning of an ISR facility located in four specific geographic regions of the western United States. The proposed Moore Ranch Project is located within the Wyoming East Uranium Milling Region identified in the GEIS. The Moore Ranch Draft SEIS both supplements and incorporates by reference relevant portions of the GEIS, and uses site-specific information from the applicant's license application and other independent sources to fulfill 10 CFR 51.20(b)(8) requirements.

DATES: The public comment period on this draft SEIS begins with publication of this notice and continues until February 1, 2010. Written comments should be submitted as described in the **ADDRESSES** section of this notice. The NRC will consider comments received, or postmarked, after that date to the extent practical.

ADDRESSES: Comments may be submitted by any one of the following methods. Please include Docket ID NRC–2009–0364 in the subject line of your comments. Comments submitted either in writing or in electronic form will be posted on the NRC Web site and on the Federal rulemaking Web site: *http://www.regulations.gov*. Because comments will not be edited to remove either identifying or contact information, the NRC cautions against including any information in your submission that you do not want publicly disclosed.

The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those persons that the NRC will not edit their comments to remove any identifying or contact information, and therefore, they should not include any information in

their comments that they do not want publicly disclosed.

Federal Rulemaking Web site: Go to *http://www.regulations.gov* and search for documents filed under Docket ID NRC–2009–0364. Comments may be submitted electronically through this Web site. Address questions about NRC dockets to Carol Gallagher 301–492–3668; e-mail *Carol.Gallagher@nrc.gov.*

Mail comments to: Michael T. Lesar, Chief, Rulemaking and Directives Branch (RDB), Division of Administrative Services, Office of Administration, Mail Stop: TWB–05–B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, or by fax to RDB at (301) 492–3446. Comments may also be submitted electronically to the following address: *MooreRanchISRSEIS@nrc.gov*.

Publicly available documents related to this notice can be accessed using the following methods:

NRC's Public Document Room (PDR): The public may examine and have copied, for a fee, publicly available documents at the NRC's PDR, Public File Area O1 F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland.

NRC's Agencywide Documents Access and Management System (ADAMS): Publicly available documents created or received at the NRC are available electronically at the NRC's Electronic Reading Room at *http://www.nrc.gov/reading-rm/adams.html.* From this page, the public can gain entry into ADAMS, which provides text and image files of NRC's public documents. If you either do not have access to ADAMS or if there are problems accessing the documents located in ADAMS, contact the NRC's PDR reference staff at 1–800–397–4209, 301–415–4737, or by e-mail to *pdr.resource@nrc.gov.* The ''Environmental Impact Statement for the Moore Ranch ISR Project in Campbell County, Wyoming—Supplement to the Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities'' is available electronically under ADAMS Accession Number ML093350050.

The draft SEIS for the Moore Ranch ISR Project also may be accessed via the internet at *http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/* by selecting ''NUREG–1910.'' The draft SEIS will be Supplement 1 to NUREG–1910. Additionally, a copy of the SEIS will be available at the following public library: Campbell County Public Library, 2101 South 4J Road, Gillette, Wyoming 82718, 307–687–0009.

Federal Rulemaking Web site: Public comments and supporting materials related to this notice can be found at *http://www.regulations.gov* by searching on Docket ID: NRC–2009–0364.

FOR FURTHER INFORMATION CONTACT: For information on the environmental review process related to the draft SEIS for the Moore Ranch Project, please contact Behram Shroff, Project Manager, Division of Waste Management and Environmental Protection (DWMEP), Mail Stop T–8F5, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, by phone at 1 (800) 368–5642, extension 0666. For general or technical information associated with the safety and licensing of uranium milling facilities, please contact Stephen Cohen, Team Lead, Uranium Recovery Branch, DWMEP, Mail Stop T–8F5, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, by phone at 1 (800) 368–5642, extension 7182.

SUPPLEMENTARY INFORMATION: The Atomic Energy Act of 1954, as amended by the Uranium Mill Tailings Radiation Control Act of 1978, authorizes NRC to issue licenses for the possession and use of source material and byproduct material. These statutes require NRC to license facilities in accordance with NRC regulatory requirements to protect public health and safety from radiological hazards. ISR uranium facilities must meet NRC regulatory requirements to obtain this license to operate. Under the NRC's environmental protection regulations in 10 CFR Part 51.20(b)(8), which implements NEPA, issuance of a license to possess and use source material for uranium milling requires either an EIS or a supplement to an EIS.

To help fulfill this requirement, the NRC staff and its contractor, the Center for Nuclear Waste Regulatory Analyses, in cooperation with the Wyoming Department of Environmental Quality (Land Quality Division), issued NUREG–1910, ''Generic Environmental Impact Statement for In-Situ Uranium Milling Facilities'' (the GEIS) in June 2009. The GEIS assessed the potential environmental impacts associated with the construction, operation, aquifer restoration, and decommissioning of an ISR facility located in four specific geographic areas of the western United States (U.S.). The proposed Moore Ranch ISR Project is located in one such region, the Wyoming East Uranium Milling Region. The GEIS evaluated the range of potential impacts in the four geographic regions and evaluated whether the potential impacts would be essentially the same for all ISR facilities or whether site-specific information and analysis would be required to determine the potential impacts. As such, the GEIS provides a starting point for NRC's NEPA analyses for site-specific license applications for both new ISR facilities and to renew or amend the applications for existing ISR licenses.

By letter dated October 2, 2007, Energy Metals Corporation, a wholly-owned subsidiary of Uranium One (Uranium One), submitted an application to the NRC for a source material license for the Moore Ranch ISR Project, located in southwest Campbell County, in south-central Wyoming, about halfway between the Towns of Wright located 40 km (25 mi) to the northeast and Midwest-Edgerton located 39 km (24 mi) to the southwest. The City of Gillette, Wyoming is located approximately 85 km (53 mi) to the northwest, and the City of Casper, Wyoming is located approximately 85 km (53 mi) to the southwest of the proposed site. Planned facilities associated with the proposed Moore Ranch ISR Project include a central plant with uranium processing capabilities; two wellfields with injection, production, and monitor wells, header houses, pipeline to connect the wellfields to the central plant, and a network of access roads. The proposed license area consists of approximately 2,879 ha (7,110 ac) of remotely located private land, with about 14 percent of the surface rights being administered by the State of Wyoming. The U.S. Department of Interior, Bureau of Land Management does not administer surface rights for any portion of the proposed license area.

ISR facilities recover uranium from low grade ores that may not be economically recoverable by other methods. In the ISR process, a leaching agent (called a lixiviant), such as oxygen and sodium bicarbonate, is added to native groundwater for injection through wells into the subsurface ore body to dissolve the uranium. Before ISR operations can begin, the portion of the aquifer designated for uranium recovery must be exempted by the U.S. Environmental Protection Agency (EPA) from being an underground source of drinking water in accordance with the Safe Drinking Water Act (as implemented by EPA at 40 CFR 146.4). The injected solution now containing the dissolved uranium, is pumped back (recovered) to the surface and sent to a processing plant, where ion exchange is used to separate the uranium from the solution. The ISR process also frees other metals and minerals from the host aquifer. As a result, operators of ISR facilities are required to restore the groundwater affected by operations. In the processing plant, the recovered

uranium is concentrated into the product known as ''yellowcake,'' which is then shipped to a uranium conversion facility for further processing in the overall uranium fuel cycle.

In this draft SEIS, the NRC staff assessed the potential environmental impacts from the construction, operation, aquifer restoration, and decommissioning of the proposed Moore Ranch ISR Project. In so doing, the NRC staff evaluated site-specific data and information from the Moore Ranch ISR Project to determine if the Moore Ranch site characteristics and Uranium One's proposed activities were consistent with that evaluated in the GEIS. NRC staff then determined which relevant sections of the GEIS and impact conclusions could be incorporated by reference. The NRC staff also determined if either additional data or analysis was needed to determine the potential environmental impacts on a specific environmental resource area. The NRC staff documented its conclusions and determinations in the draft SEIS.

In addition to the action proposed by Uranium One, the NRC staff also addressed the no-action alternative in the draft SEIS. Under this alternative, NRC would deny Uranium One's request to construct and operate an ISR facility at the Moore Ranch ISR Project. The no-action alternative serves as a baseline to compare the potential environmental impacts.

The NRC staff also considered other alternatives but eliminated them from detailed analysis. Conventional mining/milling and conventional mining/heap leach processing are two potential methods of uranium recovery at the Moore Ranch ISR Project. However, given the recognized more substantial environmental impacts of conventional mining (whether by open pit or underground techniques) and conventional milling or heap leach processing, these alternatives were not further considered. The NRC staff also evaluated alternative lixiviants (acid- and ammonia-based), alternative waste disposal methods, and an alternative site location within the proposed area. For reasons discussed in the draft SEIS, these alternatives also were eliminated from further consideration.

This draft SEIS is being issued for public comment. The public comment period on the draft SEIS begins with publication of this notice and continues until February 1, 2010. Written comments should be submitted as described in the **ADDRESSES** section of this notice. The NRC will consider comments received or postmarked after that date to the extent practical.

Dated at Rockville, Maryland, this 4th day of December 2009.

For the U.S. Nuclear Regulatory Commission.

Patrice M. Bubar,

Deputy Director, Environmental Protection and Performance Assessment Directorate, Division of Waste Management, and Environmental Protection, Office of Federal and State Materials, and Environmental Management Programs.

[FR Doc. E9–29553 Filed 12–10–09; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2008–0339]

Notice of Availability of Draft Environmental Impact Statement for the Nichols Ranch In-Situ Recovery (ISR) Project in Campbell and Johnson Counties, WY; Supplement to the Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of availability.

SUMMARY: Notice is hereby given that the U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment a Draft Supplemental Environmental Impact Statement for the Nichols Ranch *In-Situ* Recovery (ISR) Project. By letter dated November 30, 2007, Uranerz Energy Corporation (Uranerz), submitted an application to the NRC for a new source material license for the Nichols Ranch ISR Project, which Uranerz proposes to be located in the Powder River Basin in Campbell and Johnson Counties, Wyoming. Uranerz is proposing to recover uranium from the Nichols Ranch ISR Project site using the in-situ leach (also know as the in-situ recovery (ISR)) process.

The Atomic Energy Act of 1954, as amended by the Uranium Mill Tailings Radiation Control Act of 1978, authorizes the NRC to issue licenses for the possession and use of source material and byproduct material. These statutes require that NRC license facilities, including ISR operations, in accordance with NRC regulatory requirements to protect public health and safety from radiological hazards. Under the NRC's environmental protection regulations in the Code of Federal Regulations, Title 10, Part 51 (10 CFR part 51), that implement the National Environmental Policy Act of 1969 (NEPA), preparation of an environmental impact statement (EIS) or supplement to an EIS (SEIS) is required for issuance of a license to possess and use source material for uranium milling (see 10 CFR 51.20(b)(8)).

In June 2009, the NRC staff issued NUREG–1910, ''Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities'' (herein referred to as the GEIS). In the GEIS, NRC assessed the potential environmental impacts from the construction, operation, aquifer restoration, and decommissioning of an ISR facility located in four specific geographic regions of the western United States. The proposed Nichols Ranch ISR Project is located within the Wyoming East Uranium Milling Region identified in the GEIS. The Nichols Ranch ISR Project Draft SEIS both supplements and incorporates by reference relevant portions of the GEIS and uses site specific information from the applicant's license application and other independent sources to fulfill the requirements in 10 CFR 51.20(b)(8).

DATES: The public comment period on the Draft SEIS begins with publication of this notice and continues until February 01, 2010. Written comments should be submitted as described in the **ADDRESSES** section of this notice. The NRC will consider comments received or postmarked after that date to the extent practical.

ADDRESSES: You may submit comments by any one of the following methods. Please include Docket ID NRC–2008–0339 in the subject line of your comments. Comments submitted in writing or in electronic form will be posted on the NRC Web site and on the Federal rulemaking Web site *http://www.regulations.gov.* Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed.

The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those persons that the NRC will not edit their comments to remove any identifying or contact information, and therefore, they should not include any information in their comments that they do not want publicly disclosed.

Federal Rulemaking Web site: Go to *http://www.regulations.gov* and search for documents filed under Docket ID NRC–2008–0339. Comments may be submitted electronically through this Web site. Address questions about NRC dockets to Carol Gallagher at 301–492–

3668, or e-mail at *Carol.Gallagher@nrc.gov.*

Mail comments to: Michael T. Lesar, Chief, Rulemaking and Directives Branch (RDB), Division of Administrative Services, Office of Administration, Mail Stop: TWB–05–B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, or by fax to RDB at (301) 492–3446. You may also send comments electronically to *NicholsRanchISRSEIS@nrc.gov.*

Publicly available documents related to this notice can be accessed using the following methods:

NRC's Public Document Room (PDR): The public may examine and have copied, for a fee, publicly available documents at the NRC's PDR, Public File Area O1 F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland.

NRC's Agencywide Documents Access and Management System (ADAMS): Publicly available documents created or received at the NRC are available electronically at the NRC's Electronic Reading Room at *http://www.nrc.gov/reading-rm/adams.html.* From this page, the public can gain entry into ADAMS, which provides text and image files of NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's PDR reference staff at 1–800–397–4209, 301–415–4737, or by e-mail to *Pdr.Resource@nrc.gov.* The ''Environmental Impact Statement for the Nichols Ranch ISR Project in Campbell and Johnson Counties, Wyoming—Supplement to the Generic Environmental Impact Statement for *In-Situ* Leach Uranium Milling Facilities'' is available electronically under ADAMS Accession Number ML093340536.

The Draft SEIS for the Nichols Ranch ISR Project also may be accessed on the internet at http://*www.nrc.gov/reading-rm/doc-collections/nuregs/staff/* by selecting ''NUREG–1910.'' The Draft SEIS will be Supplement 2 to NUREG–1910. Additionally, a copy of the Draft SEIS will be available at the following public libraries:

Campbell County Public Library, 2101 South 4J Road, Gillette, Wyoming 82718, 307–687–0009.

Johnson County Library, 171 North Adams Avenue, Buffalo, Wyoming 82834, 307–684–5546.

Federal Rulemaking Web site: Public comments and supporting materials related to this notice can be found at *http://www.regulations.gov* by searching on Docket ID: NRC–2008–0339.

FOR FURTHER INFORMATION CONTACT: For information on environmental review process related to the Draft SEIS for the Nichols Ranch ISR Project, please contact Irene Yu, Project Manager, Environmental Review Branch, Division of Waste Management and Environmental Protection (DWMEP), Mail Stop T–8F5, the U.S. Nuclear Regulatory Commission, Washington, DC, 20555–0001, by phone at 1 (800) 368–5642, extension 1951. For general or technical information associated with the safety and licensing of uranium milling facilities, please contact Stephen Cohen, Team Lead, Uranium Recovery Licensing Branch, DWMEP, Mail Stop T–8F5, the U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, by phone at 1 (800) 368–5642, extension 7182.

SUPPLEMENTARY INFORMATION: The Atomic Energy Act, as amended by the Uranium Mill Tailings Radiation Control Act of 1978, authorizes NRC to issue licenses for the possession and use of source material and byproduct material. These statutes require that NRC license facilities, including ISR operations, in accordance with NRC regulatory requirements to protect public health and safety from radiological hazards. In-situ uranium recovery facilities must meet NRC regulatory requirements in order to obtain this license to operate. Under the NRC's environmental protection regulations in 10 CFR part 51.21(b)(8), which implements NEPA, issuance of a license to possess and use source material for uranium milling requires an EIS or a supplement to an EIS.

To help fulfill this requirement, the NRC staff and its contractor, the Center for Nuclear Waste Regulatory Analyses, in cooperation with the Wyoming Department of Environmental Quality (Land Quality Division), issued the GEIS in June 2009. The GEIS was prepared to assess the potential environmental impacts associated with the construction, operation, aquifer restoration, and decommissioning of an ISR facility in four specific geographic areas of the western United States. The proposed Nichols Ranch ISR Project is located in one such region, the Wyoming East Uranium Milling Region. The GEIS evaluated the range of potential impacts in the four geographic regions and evaluated whether the potential impact would be essentially the same for all ISR facilities or whether site-specific information and analysis would be required to determine the potential impacts. As such, the GEIS provides a starting point for the NRC's NEPA analyses for site-specific license applications for new ISR facilities, as well as for applications to renew or amend existing ISR licenses.

By letter dated November 30, 2007, Uranerz submitted an application to the NRC for a new source material license for the Nichols Ranch ISR Project, which Uranerz proposes to be located in Campbell and Johnson Counties, Wyoming, approximately 46 miles south-southwest of Gillette, Wyoming and approximately 61 miles north-northeast of Casper, Wyoming. Planned facilities associated with the proposed Nichols Ranch ISR Project include a central processing plant, satellite facility, accompanying well fields with injection, production, and monitoring wells, header houses, pipelines, and access roads. The total land surface ownership of the proposed Nichols Ranch ISR Project is approximately 3,371 acres, of which 3,091 acres are privately owned and 280 acres are U.S. Government-owned and administered by the U.S. Department of Interior, Bureau of Land Management (BLM). The proposed Nichols Ranch ISR Project would be divided into two noncontiguous units, the Nichols Ranch Unit and the Hank Unit. Because a portion of the proposed Nichols Ranch ISR Project site is administered by the BLM, the NRC coordinated its environmental review with the BLM to promote efficiencies in each agency's environmental review. This coordination was undertaken in tandem with developing a memorandum of understanding (MOU) with the BLM that establishes a cooperating agency status between the agencies. The MOU was finalized on November 30, 2009, and NRC plans to use it in the review of applications that are in their early stages in order to effectively integrate BLM as a cooperating agency into the review of future applications.

ISR facilities recover uranium from low grade ores that may not be economically recoverable by other methods. In the ISR process, a leaching agent (called a lixiviant), such as oxygen and sodium bicarbonate, is added to native groundwater for injection through wells into the subsurface ore body to dissolve the uranium. Before ISR operations can begin, the portion of the aquifer designated for uranium recovery must be exempted by the U.S. Environmental Protection Agency (EPA) from being an underground source of drinking water in accordance with the Safe Drinking Water Act (as implemented by EPA at 40 CFR 146.4). The injected solution, now containing the dissolved uranium, is pumped back (*i.e.* recovered) to the surface and sent to a processing plant, where ion

exchange is used to separate the uranium from the solution. The ISR process also frees other metals and minerals from the host aquifer. As a result, operators of ISR facilities are required to restore the groundwater affected by operations and to decommission the facility when operations have ceased. In the processing plant, the recovered uranium is concentrated into the product known as ''yellowcake,'' which is then shipped to a uranium conversion facility for further processing in the overall uranium fuel cycle.

In this Draft SEIS, the NRC staff has assessed the potential environmental impacts from the construction, operation, aquifer restoration, and decommissioning of the proposed Nichols Ranch ISR Project. In doing so, the NRC staff evaluated site-specific data and information from the Nichols Ranch ISR Project to determine if Uranerz's proposed activities and the site characteristics were consistent with those evaluated in the GEIS. NRC then determined which relevant sections of the Draft GEIS and impact conclusions in the Draft GEIS could be incorporated by reference. The NRC staff also determined if additional data or analysis was needed to determine the environmental impacts for a specific environmental resource area. The NRC staff documented its assessments and conclusions in the Draft SEIS.

In addition to the action proposed by Uranerz, the NRC staff addressed two alternatives in the Draft SEIS: A No-Action alternative and a Modified Action alternative. Under the No-Action alternative, NRC would deny Uranerz's request to construct and operate an ISR facility at the Nichols Ranch ISR Project. The No-Action alternative serves as a baseline for comparison of the potential environmental impacts. Under the Modified Action alternative, the NRC would only issue Uranerz a license for ISR uranium milling and processing at the Nichols Ranch Unit and not the Hank Unit. By doing so, this alternative would only consist of extracting uranium from well fields developed in the Nichols Ranch Unit and processing at a central processing plant located at the Nichols Ranch Unit.

The NRC staff also considered other alternatives but eliminated them from detailed analysis. Conventional mining/milling and conventional mining/heap leach processing are two potential methods of uranium recovery at the Nichols Ranch ISR Project. However, given the recognized more substantial environmental impacts of conventional mining (whether by open pit or underground techniques) and conventional milling or heap leach processing, these alternatives were not further considered. The NRC staff also evaluated alternative lixiviants (acid- and ammonia-based), and alternative waste disposal methods. For reasons discussed in the Draft SEIS, these alternatives also were eliminated from further consideration.

This Draft SEIS is being issued for public comment. The public comment period on the Draft SEIS begins with publication of this notice and continues until February 1, 2010. Written comments should be submitted as described in the **ADDRESSES** section of this notice. The NRC will consider comments received or postmarked after that date to the extent practical.

Dated at Rockville, Maryland, this 4th day of December 2009.

For the U.S. Nuclear Regulatory Commission.

Patrice M. Bubar,

Deputy Director, Environmental Protection and Performance Assessment Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs.

[FR Doc. E9–29550 Filed 12–10–09; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2009–0550]

NUREG–1921, EPRI/NRC–RES Fire Human Reliability Analysis Guidelines, Draft Report for Comment

AGENCY: Nuclear Regulatory Commission.

ACTION: Announcement of issuance for public comment, availability.

SUMMARY: The Nuclear Regulatory Commission has issued for public comment a document entitled: ''NUREG–1921 (EPRI 1019196), EPRI/NRC–RES Fire Human Reliability Analysis Guidelines, Draft Report for Comment.''

DATES: Please submit comments by February 15, 2010. Comments received after this date will be considered if it is practical to do so, but the NRC staff is able to ensure consideration only for comments received on or before this date.

ADDRESSES: You may submit comments by any one of the following methods. Please include Docket ID NRC–2009–0550 in the subject line of your comments. Comments submitted in writing or in electronic form will be posted on the NRC Web site and on the Federal rulemaking Web site Regulations.gov. Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed.

The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those persons that the NRC will not edit their comments to remove any identifying or contact information, and therefore, they should not include any information in their comments that they do not want publicly disclosed.

Federal Rulemaking Web site: Go to *http://www.regulations.gov* and search for documents filed under Docket ID NRC–2009–0550. Address questions about NRC dockets to Carol Gallagher 301–492–3668; e-mail *Carol.Gallagher@nrc.gov*.

Mail comments to: Michael T. Lesar, Chief, Rulemaking and Directives Branch (RDB), Division of Administrative Services, Office of Administration, Mail Stop: TWB–05–B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, or by fax to RDB at (301) 492–3446.

You can access publicly available documents related to this notice using the following methods:

NRC's Public Document Room (PDR): The public may examine and have copied for a fee publicly available documents at the NRC's PDR, Public File Area O1 F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland.

NRC's Agencywide Documents Access and Management System (ADAMS): Publicly available documents created or received at the NRC are available electronically at the NRC's Electronic Reading Room at *http://www.nrc.gov/reading-rm/adams.html*. From this page, the public can gain entry into ADAMS, which provides text and image files of NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's PDR reference staff at 1–800–397–4209, 301–415–4737, or by e-mail to *pdr.resource@nrc.gov*. NUREG–1921 ''EPRI/NRC–RES Fire Human Reliability Analysis Guidelines'' is available electronically under ADAMS Accession Number ML093340307.

Federal Rulemaking Web site: Public comments and supporting materials related to this notice can be found at *http://www.regulations.gov* by searching on Docket ID: NRC–2009–0550.

FOR FURTHER INFORMATION CONTACT: Kendra Hill, Division of Risk Analysis, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. Telephone: 301–251–3300, e-mail: *Kendra.hill@nrc.gov*.

SUPPLEMENTARY INFORMATION: NUREG–1921 (EPRI 1019196), ''EPRI/NRC–RES Fire Human Reliability Analysis Guidelines, Draft Report for Comment'' was written as a collaborative effort by the U.S. Nuclear Regulatory Commission (NRC) Office of Nuclear Regulatory Research (RES) and the Electric Power Research Institute (EPRI) to provide guidance on how to perform the human reliability analysis (HRA) for a fire PRA. In 2007, EPRI and NRC–RES embarked on a cooperative project to develop explicit guidance for estimating human error probabilities (HEPs) for human error events under fire generated conditions, building upon existing human reliability analysis (HRA) methods. This report describes the methodology and guidance developed through this project. This report includes guidance on addressing the range of fire procedures used in existing plants, the range of strategies for main control room abandonment, and the potential impact of fire-induced spurious electrical effects on crew performance.

Dated at Rockville, Maryland, this 1st day of Dec 2009.

For the Nuclear Regulatory Commission.

Mark H. Salley,

Chief, Fire Research Branch, Division of Risk Analysis, Office of Nuclear Regulatory Research.

[FR Doc. E9–29555 Filed 12–10–09; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2009–0552; Docket Nos. 50–275 and 50–323]

Pacific Gas & Electric Company; Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant, Units 1 and 2; Facility Operating Licenses Nos. DPR–80 and DPR–82 for an Additional 20-Year Period

The U.S. Nuclear Regulatory Commission (NRC or Commission) has received an application, dated November 23, 2009, from Pacific Gas & Electric Company (PG&E), filed pursuant to Section 104(b) of the Atomic Energy Act of 1954, as amended, and Title 10 of the *Code of Federal Regulations* Part 54 (10 CFR Part 54), to renew the operating licenses for the Diablo Canyon Nuclear Power Plant (DCPP), Units 1 and 2. Renewal of the licenses would authorize the applicant to operate each facility for an additional 20-year period beyond the period specified in the respective current operating licenses. The current operating license for DCPP, Unit 1 (DPR–80), expires on November 2, 2024. DCPP, Unit 1, is a four-loop pressurized water reactor designed by Westinghouse. The current operating license for DCPP, Unit 2 (DPR–82), expires on August 26, 2025. DCPP, Unit 2, is also a four-loop pressurized water reactor designed by Westinghouse. Both units are located near San Luis Obispo, California. The acceptability of the tendered application for docketing, and other matters, including an opportunity to request a hearing, will be the subject of subsequent **Federal Register** notices.

Copies of the application are available to the public at the Commission's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852 or through the internet from the NRC's Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room under Accession Number ML093340125. The ADAMS Public Electronic Reading Room is accessible from the NRC Web site at *http://www.nrc.gov/reading-rm/adams.html.* In addition, the application is available at *http://www.nrc.gov/reactors/operating/licensing/renewal/applications.html.* Persons who do not have access to the internet or who encounter problems in accessing the documents located in ADAMS should contact the NRC's PDR reference staff at 1–800–397–4209, extension 4737, or by e-mail to *pdr.resource@nrc.gov*.

A copy of the license renewal application for DCPP, Units 1 and 2, is also available to local residents near the site at the San Luis Obispo Public Library, 995 Palm Street, San Luis Obispo, California 93401, and at the Paso Robles Public Library, 1000 Spring Street, Paso Robles, California 93446.

Dated at Rockville, Maryland, this 4th day of December 2009.

For the Nuclear Regulatory Commission.

Brian E. Holian,

Director, Division of License Renewal, Office of Nuclear Reactor Regulation.

[FR Doc. E9–29548 Filed 12–10–09; 8:45 am]

BILLING CODE 7590–01–P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #11958 and #11959]

Arkansas Disaster #AR–00036

AGENCY: U.S. Small Business Administration.

ACTION: Notice.

SUMMARY: This is a notice of an Administrative declaration of a disaster for the State of ARKANSAS dated 12/04/2009.

Incident: Severe Storms, Tornadoes and Flooding.

Incident Period: 10/29/2009 and continuing.

DATES: *Effective Date:* 12/04/2009.

Physical Loan Application Deadline Date: 02/02/2010.

Economic Injury (EIDL) Loan Application Deadline Date: 09/04/2010.

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street, SW., Suite 6050, Washington, DC 20416.

SUPPLEMENTARY INFORMATION: Notice is hereby given that as a result of the Administrator's disaster declaration, applications for disaster loans may be filed at the address listed above or other locally announced locations.

The following areas have been determined to be adversely affected by the disaster:

Primary Counties: Pulaski.

Contiguous Counties:

Arkansas: Faulkner; Grant; Jefferson; Lonoke; Perry; Saline.

The Interest Rates are:

	Percent
Homeowners with Credit Available Elsewhere	5.125
Homeowners without Credit Available Elsewhere	2.562
Businesses with Credit Available Elsewhere	6.000
Businesses & Small Agricultural Cooperatives without Credit Available Elsewhere	4.000
Other (Including Non-Profit Organizations) with Credit Available Elsewhere	3.625
Businesses And Non-Profit Organizations without Credit Available Elsewhere	3.000

The number assigned to this disaster for physical damage is 11958 B and for economic injury is 11959 0.

The State which received an EIDL Declaration # is Arkansas.

(Catalog of Federal Domestic Assistance Numbers 59002 and 59008)

Dated: December 4, 2009.

Karen G. Mills,

Administrator.

[FR Doc. E9–29525 Filed 12–10–09; 8:45 am]

BILLING CODE 8025–01–P

SECURITIES AND EXCHANGE COMMISSION

[Investment Company Act Release No. 29068; File No. 812–13653]

Madison Asset Management, LLC, et al.; Notice of Application

December 7, 2009.

AGENCY: Securities and Exchange Commission (''Commission'').

ACTION: Notice of application for an order under section 12(d)(1)(J) of the Investment Company Act of 1940 (''Act'') for an exemption from sections 12(d)(1)(A) and (B) of the Act, and under sections 6(c) and 17(b) of the Act for an exemption from section 17(a) of the Act.

SUMMARY OF THE APPLICATION: Applicants request an order that would permit certain series of registered open-end management investment companies to acquire shares of other registered open-end management investment companies and unit investment trusts (''UITs'') that are within or outside the same group of investment companies.

APPLICANTS: Madison Asset Management, LLC (''MAM''), MEMBERS Mutual Funds (''MMF''), Ultra Series Fund (''USF''), Madison Mosaic Equity Trust, Madison Mosaic Income Trust, Madison Mosaic Tax-Free Trust, Madison Mosaic Government Money Market (each, a ''Madison Mosaic Fund,'' and collectively, the ''Madison Mosaic Funds,'' and together with MMF and USF, the ''Trusts''), Madison Investment Advisors, Inc. (''Madison'') and Madison Mosaic, LLC (''MMLLC'').

FILING DATES: The application was filed on April 16, 2009 and amended on September 4, 2009, December 4, 2009, and December 7, 2009.

HEARING OR NOTIFICATION OF HEARING: An order granting the application will be issued unless the Commission orders a hearing. Interested persons may request a hearing by writing to the Commission's Secretary and serving applicants with a copy of the request, personally or by mail. Hearing requests should be received by the Commission by 5:30 p.m. on December 28, 2009, and should be accompanied by proof of service on applicants in the form of an affidavit or, for lawyers, a certificate of service. Hearing requests should state the nature of the writer's interest, the reason for the request, and the issues contested. Persons who wish to be notified of a hearing may request notification by writing to the Commission's Secretary.

ADDRESSES: Secretary, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–1090; Applicants: c/o Madison/Mosaic Legal and Compliance Department, 8777 N. Gainey Center Drive, #220, Scottsdale, AZ 85258.

FOR FURTHER INFORMATION CONTACT: John Yoder, Senior Counsel, at (202) 551–6878, or Marilyn Mann, Branch Chief, at (202) 551–6821 (Office of Investment Company Regulation, Division of Investment Management).

SUPPLEMENTARY INFORMATION: The following is a summary of the application. The complete application may be obtained via the Commission's Web site by searching for the file number, or an applicant using the Company name box, at *http://www.sec.gov/search/search.htm* or by calling (202) 551–8090.

Applicants' Representations

1. MMF is a statutory trust organized under the laws of Delaware. USF and the Madison Mosaic Funds are business trusts organized under the laws of Massachusetts. Each Trust is registered under the Act as an open-end management investment company and, except for Madison Mosaic Government Money Market, offers multiple series (''Funds'').[1] USF is offered solely to CUNA Mutual Insurance Society (''CMIS'') and its separate accounts (together with the separate accounts of any unaffiliated insurance company that may invest in the future in USF, ''Separate Accounts'') which support the variable annuity contracts and variable life insurance policies it issues. The Separate Accounts may be registered under the Act (''Registered Separate Accounts'') or unregistered under the Act (''Unregistered Separate Accounts'').

2. MAM, an Iowa corporation, is registered under the Investment Advisers Act of 1940 (''Advisers Act'') and serves as investment adviser to MMF and USF. MAM is the investment adviser to each of the Fund of Funds, as defined below. Madison, a Wisconsin corporation, and MMLLC, a Wisconsin limited liability corporation, are each registered as investment advisors under the Advisers Act and jointly serve as investment advisers to the Madison Mosaic Funds, with the exception of the Madison Institutional Equity Option Fund (a series of Madison Mosaic Equity Trust), which is advised by MAM. MAM and MMLLC are controlled by Madison. CMIS has a non-voting interest in MAM and does not control MAM within the meaning of section 2(a)(9) of the Act.[2]

3. Applicants request relief to permit, (a) certain Funds (each, a ''Fund of Funds'') to acquire shares of registered open-end management investment companies (the ''Unaffiliated Underlying Funds'') and unit investment trusts (''Unaffiliated Underlying Trusts,'' and together with the Unaffiliated Underlying Funds, the ''Unaffiliated Funds'') that are not part of the same ''group of investment companies'' (as defined in section 12(d)(1)(G)(ii) of the Act) as the Funds of Funds, (b) the Unaffiliated Underlying Funds, their principal underwriters and any broker or dealer (''Broker'') registered under the Securities Exchange Act of 1934 to sell their shares to the Fund of Funds, (c) the Funds of Funds to acquire shares of certain other Funds in the same ''group of investment companies'' (as defined in section 12(d)(1)(G)(ii) of the Act) as the Fund of Funds (the ''Affiliated Funds,'' and together with the Unaffiliated Funds, the ''Underlying Funds''), and (d) the Affiliated Funds, their principal underwriters and any Brokers to sell shares of the Affiliated Funds to the

[1] Applicants request that the order also extend to any future series of the Trusts, and any other existing or future registered open-end management investment companies and any series thereof that are, or may in the future be, advised by MAM, Madison or MMLLC or any other investment adviser controlling, controlled by, or under common control with MAM, Madison or MMLLC (together with the Trusts, the ''Funds''). All entities that currently intend to rely on the requested order are named as applicants. Any other entity that relies on the order in the future will comply with the terms and conditions of the application.

[2] Under a prior order, the Commission granted relief to MMF, USF, Members Capital Advisors, Inc. (''MCA'') and CUNA Mutual Life Insurance Company from the provisions of sections 12(d)(1)(A), 12(d)(1)(B) and 17(a) of the Act, pursuant to which certain series of MMF and USF acquire shares of other registered open-end investment companies that are within or outside the same group of investment companies. *MEMBERS Mutual Funds, et al.*, Investment Company Act Release Nos. 27598 (December 13, 2006)(notice) and 27657 (January 9, 2007)(order) (''Existing Order''). On April 15, 2009, MCA, an indirectly wholly owned subsidiary of CMIS, and CMIS entered into an agreement under which MAM would become the investment adviser to MMF and USF (the ''Transaction''). MAM became the investment adviser to MMF and USF on July 1, 2009. On June 30, 2009, the Commission staff issued a no-action letter permitting MAM to rely on the Existing Order until the earlier of the receipt of any order granted by the Commission on the application or December 30, 2009. *Madison Asset Management, LLC, et al.* (pub. avail. June 30, 2009).

Funds of Funds. Certain of the Unaffiliated Funds may be listed and traded on a national securities exchange at negotiated prices (''ETFs''). Each Fund of Funds also may invest in securities other than shares of an investment company and in financial instruments that may not be securities within the meaning of section 2(a)(36) of the Act that are consistent with its investment objectives.

Applicants' Legal Analysis

A. Section 12(d)(1)

1. Section 12(d)(1)(A) of the Act prohibits a registered investment company from acquiring shares of an investment company if the securities represent more than 3% of the total outstanding voting stock of the acquired company, more than 5% of the total assets of the acquiring company, or, together with the securities of any other investment companies, more than 10% of the total assets of the acquiring company. Section 12(d)(1)(B) of the Act prohibits a registered open-end investment company, its principal underwriter and any broker or dealer from selling the shares of the investment company to another investment company if the sale will cause the acquiring company to own more than 3% of the acquired company's voting stock, or if the sale will cause more than 10% of the acquired company's voting stock to be owned by investment companies generally.

2. Section 12(d)(1)(J) of the Act provides that the Commission may exempt any person, security, or transaction, or any class or classes of persons, securities or transactions, from any provision of section 12(d)(1) if the exemption is consistent with the public interest and the protection of investors. Applicants seek an exemption under section 12(d)(1)(J) of the Act from the limitations of sections 12(d)(1)(A) and (B) to the extent necessary to permit the Funds of Funds to acquire shares of the Underlying Funds in excess of the limits set forth in section 12(d)(1)(A) of the Act and to permit the Unaffiliated Underlying Funds and Affiliated Funds, their principal underwriters and any Brokers to sell shares to the Funds of Funds in excess of the limits set forth in sections 12(d)(1)(B) of the Act.

3. Applicants state that the proposed arrangement will not give rise to the policy concerns underlying sections 12(d)(1)(A) and (B), which include concerns about undue influence by a fund of funds or its affiliated persons over underlying funds, excessive layering of fees, and overly complex fund structures. Accordingly, applicants believe that the requested exemption is consistent with the public interest and the protection of investors.

4. Applicants state that the proposed arrangement will not result in undue influence by a Fund of Funds or its affiliated persons over the Underlying Funds. The concern about undue influence does not arise in connection with a Fund of Funds' investment in the Affiliated Funds, since they are part of the same group of investment companies. To limit the control that a Fund of Funds or its affiliated persons may have over an Unaffiliated Fund, applicants propose a condition prohibiting: (a) MAM and any person controlling, controlled by or under common control with MAM, any investment company and any issuer that would be an investment company but for section 3(c)(1) or section 3(c)(7) of the Act advised or sponsored by MAM or any person controlling, controlled by or under common control with MAM (collectively, the ''Group''), and (b) any investment adviser within the meaning of section 2(a)(20)(B) of the Act to a Fund of Funds (''Subadviser''), any person controlling, controlled by or under common control with the Subadviser, and any investment company or issuer that would be an investment company but for section 3(c)(1) or 3(c)(7) of the Act (or portion of such investment company or issuer) advised or sponsored by the Subadviser or any person controlling, controlled by or under common control with the Subadviser (collectively, the ''Subadviser Group'') from controlling (individually or in the aggregate) an Unaffiliated Fund within the meaning of section 2(a)(9) of the Act. No Separate Account will be a member of the Group or Subadvisor Group.

5. Applicants further state that condition 2 precludes a Fund of Funds, MAM, any Subadviser, promoter or principal underwriter of a Fund of Funds, and any person controlling, controlled by or under common control with any of those entities (each, a ''Fund of Funds Affiliate'') from taking advantage of an Unaffiliated Fund, with respect to transactions between the Fund of Funds or a Fund of Funds Affiliate and the Unaffiliated Fund or the Unaffiliated Fund's investment adviser(s), sponsor, promoter, principal underwriter or any person controlling, controlled by or under common control with any of these entities (each, an ''Unaffiliated Fund Affiliate''). Condition 5 precludes a Fund of Funds or Fund of Funds Affiliate (except to the extent it is acting in its capacity as an investment adviser to an Unaffiliated Underlying Fund or sponsor to an Unaffiliated Underlying Trust) from causing an Unaffiliated Fund to purchase a security in an offering of securities during the existence of any underwriting or selling syndicate of which a principal underwriter is an officer, director, trustee, member of an advisory board, investment adviser, Subadviser, or employee of the Fund of Funds, or a person of which any such officer, director, trustee, investment adviser, Subadviser, member of an advisory board, or employee is an affiliated person (each, an ''Underwriting Affiliate,'' except any person whose relationship to the Unaffiliated Fund is covered by section 10(f) of the Act is not an Underwriting Affiliate). An offering of securities during the existence of any underwriting or selling syndicate of which a principal underwriter is an Underwriting Affiliate is an ''Affiliated Underwriting.''

6. As an additional assurance that an Unaffiliated Underlying Fund understands the implications of an investment by a Fund of Funds under the requested order, prior to a Fund of Funds' investment in the Unaffiliated Underlying Fund in excess of the limit in section 12(d)(1)(A)(i), condition 8 requires that the Fund of Funds and Unaffiliated Underlying Fund execute an agreement stating, without limitation, that their boards of directors or trustees (''Boards'') and their investment advisers understand the terms and conditions of the order and agree to fulfill their responsibilities under the order (''Participation Agreement''). Applicants note that an Unaffiliated Fund (other than an ETF whose shares are purchased by a Fund of Funds in the secondary market) will retain the right to reject an investment by a Fund of Funds.[3]

7. Applicants do not believe that the proposed arrangement will involve excessive layering of fees. With respect to investment advisory fees, applicants state that, in connection with the approval of any investment advisory contract under section 15 of the Act, the Board of each Fund of Funds, including a majority of the trustees who are not ''interested persons,'' as defined in section 2(a)(19) of the Act (''Independent Trustees''), will find that the advisory fees charged under the advisory contract are based on services provided that are in addition to, rather than duplicative of, services provided

[3] An Unaffiliated Underlying Fund, including an ETF, would retain its right to reject any initial investment by a Fund of Funds in excess of the limit in section 12(d)(1)(A)(i) of the Act by declining to execute the Participation Agreement with the Fund of Funds.

pursuant to any Underlying Fund's advisory contract(s). Applicants further state that MAM will waive fees otherwise payable to it by a Fund of Funds in an amount at least equal to any compensation (including fees received pursuant to any plan adopted by an Unaffiliated Underlying Fund pursuant to rule 12b–1 under the Act) received from an Unaffiliated Fund by MAM, or an affiliated person of MAM, other than any advisory fees paid to MAM or an affiliated person of MAM by an Unaffiliated Underlying Fund, in connection with the investment by the Fund of Funds in the Unaffiliated Fund.

8. Applicants state that with respect to Registered Separate Accounts that invest in a Fund of Funds, no sales load will be charged at the Fund of Funds level or at the Underlying Fund level. Other sales charges and service fees, as defined in Rule 2830 of the Conduct Rules of the NASD (''NASD Conduct Rule 2830''), if any, will only be charged at the Fund of Funds level or at the Underlying Fund level, not both. With respect to other investments in a Fund of Funds, any sales charges and/or service fees charged with respect to shares of the Fund of Funds will not exceed the limits applicable to funds of funds as set forth in NASD Conduct Rule 2830.

9. Applicants represent that each Fund of Funds will represent in the Participation Agreement that no insurance company sponsoring a Registered Separate Account funding variable annuity and variable life insurance contracts will be permitted to invest in the Fund of Funds unless the insurance company has certified to the Fund of Funds that the aggregate of all fees and charges associated with each contract that invests in the Fund of Funds, including fees and charges at the separate account, Fund of Funds, and Underlying Fund levels, are reasonable in relation to the services rendered, the expenses expected to be incurred, and the risks assumed by the insurance company.

10. Applicants state that the proposed arrangement will not create an overly complex fund structure. Applicants note that an Underlying Fund will be prohibited from acquiring securities of any investment company or company relying on section 3(c)(1) or 3(c)(7) of the Act in excess of the limits contained in section 12(d)(1)(A), except to the extent that such Underlying Fund: (a) receives securities of another investment company as a dividend or as a result of a plan of reorganization of a company (other than a plan devised for the purpose of evading section 12(d)(1) of the Act); or (b) acquires (or is deemed to have acquired) securities of another investment company pursuant to exemptive relief from the Commission permitting such Underlying Fund to: (i) acquire securities of one or more investment companies for short-term cash management purposes, or (ii) engage in interfund borrowing and lending transactions.

B. Section 17(a)

1. Section 17(a) of the Act generally prohibits sales or purchases of securities between a registered investment company and its affiliated persons or affiliated persons of such persons. Section 2(a)(3) of the Act defines an ''affiliated person'' of another person to include (a) any person directly or indirectly owning, controlling, or holding with power to vote, 5% or more of the outstanding voting securities of the other person; (b) any person 5% or more of whose outstanding voting securities are directly or indirectly owned, controlled, or held with power to vote by the other person; and (c) any person directly or indirectly controlling, controlled by, or under common control with the other person.

2. Applicants state that the Funds of Funds and the Affiliated Funds may be deemed to be under common control and therefore affiliated persons of one another. Applicants also state that the Funds of Funds and the Underlying Funds may be deemed to be affiliated persons of one another if a Fund of Funds acquires 5% or more of an Underlying Fund's outstanding voting securities. In light of these possible affiliations, section 17(a) could prevent an Underlying Fund from selling shares to and redeeming shares from a Fund of Funds.[4]

3. Section 17(b) of the Act authorizes the Commission to grant an order permitting a transaction otherwise prohibited by section 17(a) if it finds that (a) the terms of the proposed transaction are fair and reasonable and do not involve overreaching on the part of any person concerned; (b) the proposed transaction is consistent with the policies of each registered investment company involved; and (c) the proposed transaction is consistent with the general purposes of the Act. Section 6(c) of the Act permits the Commission to exempt any person or transactions from any provision of the Act if such exemption is necessary or appropriate in the public interest and consistent with the protection of investors and the purposes fairly intended by the policy and provisions of the Act.

4. Applicants submit that the proposed transactions satisfy the standards for relief under sections 17(b) and 6(c) of the Act, as the terms are fair and reasonable and do not involve overreaching. Applicants state that the terms upon which an Underlying Fund will sell its shares to or purchase its shares from a Fund of Funds will be based on the net asset value of each Underlying Fund.[5] Applicants also state that the proposed transactions will be consistent with the policies of each Fund of Funds and Underlying Fund, and with the general purposes of the Act.

Applicants' Conditions

Applicants agree that the order granting the requested relief shall be subject to the following conditions:

1. The members of the Group will not control (individually or in the aggregate) an Unaffiliated Fund within the meaning of section 2(a)(9) of the Act. The members of a Subadviser Group will not control (individually or in the aggregate) an Unaffiliated Fund within the meaning of section 2(a)(9) of the Act. If, as a result of a decrease in the outstanding voting securities of an Unaffiliated Fund, the Group or a Subadviser Group, each in the aggregate, becomes a holder of more than 25% of the outstanding voting securities of the Unaffiliated Fund, then the Group or the Subadviser Group will vote its shares of the Unaffiliated Fund in the same proportion as the vote of all other holders of the Unaffiliated Fund's shares. This condition will not apply to a Subadviser Group with respect to an Unaffiliated Fund for which the Fund of Funds' Sub-Adviser or a person controlling, controlled by, or under common control with the Subadviser acts as the investment adviser within the meaning section 2(a)(20)(A) of the Act (in the case of an Unaffiliated Underlying Fund) or the sponsor (in the

[4] Applicants acknowledge that receipt of any compensation by (a) an affiliated person of a Funds of Funds, or an affiliated person of such person, for the purchase by the Fund of Funds of shares of an Underlying Fund or (b) an affiliated person of an Underlying Fund, or an affiliated person of such person, for the sale by the Underlying Fund of its shares to a Fund of Funds may be prohibited by section 17(e)(1) of the Act. The Participation Agreement also will include this acknowledgement.

[5] Applicants note that a Fund of Funds generally would purchase and sell shares of an Underlying Fund that operates as an ETF through secondary market transactions rather than through principal transactions with the Underlying Fund. To the extent that a Fund of Funds purchases or redeems shares from an ETF that is an affiliated person of the Fund of Funds in exchange for a basket of specified securities as described in the application for the exemptive order upon which the ETF relies, applicants also request relief from section 17(a) for those transactions.

case of an Unaffiliated Underlying Trust).

2. No Fund of Funds or Fund of Funds Affiliate will cause any existing or potential investment by the Fund of Funds in an Unaffiliated Fund to influence the terms of any services or transactions between the Fund of Funds or a Fund of Funds Affiliate and the Unaffiliated Fund or an Unaffiliated Fund Affiliate.

3. The Board of each Fund of Funds, including a majority of the Independent Trustees, will adopt procedures reasonably designed to assure that MAM and any Subadviser are conducting the investment program of the Fund of Funds without taking into account any consideration received by the Fund of Funds or a Fund of Funds Affiliate from an Unaffiliated Fund or an Unaffiliated Fund Affiliate in connection with any services or transactions.

4. Once an investment by a Fund of Funds in the securities of an Unaffiliated Underlying Fund exceeds the limit of section 12(d)(1)(A)(i) of the Act, the Board of the Unaffiliated Underlying Fund, including a majority of the Independent Trustees, will determine that any consideration paid by the Unaffiliated Underlying Fund to a Fund of Funds or a Fund of Funds Affiliate in connection with any services or transactions: (a) Is fair and reasonable in relation to the nature and quality of the services and benefits received by the Unaffiliated Underlying Fund; (b) is within the range of consideration that the Unaffiliated Underlying Fund would be required to pay to another unaffiliated entity in connection with the same services or transactions; and (c) does not involve overreaching on the part of any person concerned. This condition does not apply with respect to any services or transactions between an Unaffiliated Underlying Fund and its investment adviser(s), or any person controlling, controlled by, or under common control with such investment adviser(s).

5. No Fund of Funds or Fund of Funds Affiliate (except to the extent it is acting in its capacity as an investment adviser to an Unaffiliated Underlying Fund or sponsor to an Unaffiliated Underlying Trust) will cause an Unaffiliated Fund to purchase a security in any Affiliated Underwriting.

6. The Board of an Unaffiliated Underlying Fund, including a majority of the Independent Trustees, will adopt procedures reasonably designed to monitor any purchases of securities by the Unaffiliated Underlying Fund in an Affiliated Underwriting once an investment by a Fund of Funds in the securities of the Unaffiliated Underlying Fund exceeds the limit of section 12(d)(1)(A)(i) of the Act, including any purchases made directly from an Underwriting Affiliate. The Board of the Unaffiliated Underlying Fund will review these purchases periodically, but no less frequently than annually, to determine whether or not the purchases were influenced by the investment by the Fund of Funds in the Unaffiliated Underlying Fund. The Board of the Unaffiliated Underlying Fund will consider, among other things: (a) Whether or not the purchases were consistent with the investment objectives and policies of the Unaffiliated Underlying Fund; (b) how the performance of securities purchased in an Affiliated Underwriting compares to the performance of comparable securities purchased during a comparable period of time in underwritings other than Affiliated Underwritings or to a benchmark such as a comparable market index; and (c) whether or not the amount of securities purchased by the Unaffiliated Underlying Fund in Affiliated Underwritings and the amount purchased directly from an Underwriting Affiliate have changed significantly from prior years. The Board of an Unaffiliated Underlying Fund will take any appropriate actions based on its review, including, if appropriate, the institution of procedures designed to assure that purchases of securities in Affiliated Underwritings are in the best interests of shareholders.

7. Each Unaffiliated Underlying Fund will maintain and preserve permanently in an easily accessible place a written copy of the procedures described in the preceding condition, and any modifications to such procedures, and will maintain and preserve for a period of not less than six years from the end of the fiscal year in which any purchase from an Affiliated Underwriting occurred, the first two years in an easily accessible place, a written record of each purchase of securities in an Affiliated Underwriting once an investment by a Fund of Funds in the securities of an Unaffiliated Underlying Fund exceeds the limit of section 12(d)(1)(A)(i) of the Act, setting forth the: (a) Party from whom the securities were acquired, (b) identity of the underwriting syndicate's members, (c) terms of the purchase, and (d) information or materials upon which the determinations of the Board of the Unaffiliated Underlying Fund were made.

8. Prior to its investment in shares of an Unaffiliated Underlying Fund in excess of the limit set forth in section 12(d)(1)(A)(i) of the Act, the Fund of Funds and the Unaffiliated Underlying Fund will execute a Participation Agreement stating, without limitation, that their Boards and their investment advisers understand the terms and conditions of the order and agree to fulfill their responsibilities under the order. At the time of its investment in shares of an Unaffiliated Underlying Fund in excess of the limit set forth in section 12(d)(1)(A)(i), a Fund of Funds will notify the Unaffiliated Underlying Fund of the investment. At such time, the Fund of Funds will also transmit to the Unaffiliated Underlying Fund a list of the names of each Fund of Funds Affiliate and Underwriting Affiliate. The Fund of Funds will notify the Unaffiliated Underlying Fund of any changes to the list as soon as reasonably practicable after a change occurs. The Unaffiliated Underlying Fund and the Fund of Funds will maintain and preserve a copy of the order, the Participation Agreement and the list with any updated information for the duration of the investment and for a period of not less than six years thereafter, the first two years in an easily accessible place.

9. Before approving any advisory contract under section 15 of the Act, the Board of each Fund of Funds, including a majority of the Independent Trustees, shall find that the advisory fees charged under the advisory contract are based on services provided that are in addition to, rather than duplicative of, services provided under the advisory contract(s) of any Underlying Fund in which the Fund of Funds may invest. Such finding, and the basis upon which the finding was made, will be recorded fully in the minute books of the appropriate Fund of Funds.

10. MAM will waive fees otherwise payable to it by a Fund of Funds in an amount at least equal to any compensation (including fees received pursuant to any plan adopted by an Unaffiliated Underlying Fund pursuant to rule 12b–1 under the Act) received from an Unaffiliated Fund by MAM, or an affiliated person of MAM, other than any advisory fees paid to MAM or its affiliated person by an Unaffiliated Underlying Fund, in connection with the investment by the Fund of Funds in the Unaffiliated Fund. Any Subadviser will waive fees otherwise payable to the Subadviser, directly or indirectly, by the Fund of Funds in an amount at least equal to any compensation received by the Subadviser, or an affiliated person of the Subadviser, from an Unaffiliated Fund, other than any advisory fees paid to the Subadviser or its affiliated person by an Unaffiliated Underlying Fund, in

connection with the investment by the Fund of Funds in the Unaffiliated Fund made at the direction of the Subadviser. In the event that the Subadviser waives fees, the benefit of the waiver will be passed through to the Fund of Funds.

11. With respect to Registered Separate Accounts that invest in a Fund of Funds, no sales load will be charged at the Fund of Funds level or at the Underlying Fund level. Other sales charges and service fees, as defined in NASD Conduct Rule 2830, if any, will only be charged at the Fund of Funds level or at the Underlying Fund level, not both. With respect to other investments in a Fund of Funds, any sales charges and/or service fees charged with respect to shares of a Fund of Funds will not exceed the limits applicable to funds of funds set forth in NASD Conduct Rule 2830.

12. No Underlying Fund will acquire securities of any other investment company or company relying on section 3(c)(1) or 3(c)(7) of the Act in excess of the limits contained in section 12(d)(1)(A) of the Act, except to the extent that such Underlying Fund: (a) Receives securities of another investment company as a dividend or as a result of a plan of reorganization of a company (other than a plan devised for the purpose of evading section 12(d)(1) of the Act); or (b) acquires (or is deemed to have acquired) securities of another investment company pursuant to exemptive relief from the Commission permitting such Underlying Fund to: (i) Acquire securities of one or more investment companies for short-term cash management purposes, or (ii) engage in interfund borrowing and lending transactions.

For the Commission, by the Division of Investment Management, pursuant to delegated authority.

Florence E. Harmon.

Deputy Secretary.

[FR Doc. E9–29523 Filed 12–10–09; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–61122; File No. SR–FINRA–2009–083]

Self-Regulatory Organizations; Financial Industry Regulatory Authority, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Adopt FINRA Rule 2330 (Members' Responsibilities Regarding Deferred Variable Annuities) in the Consolidated FINRA Rulebook

December 7, 2009.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'')[1] and Rule 19b-4 thereunder,[2] notice is hereby given that on November 20, 2009 Financial Industry Regulatory Authority, Inc. (''FINRA'') (f/k/a National Association of Securities Dealers, Inc. (''NASD'')) filed with the Securities and Exchange Commission (''SEC'' or ''Commission'') the proposed rule change as described in Items I, II and III below, which Items have been substantially prepared by FINRA. FINRA has designated the proposed rule change as constituting a ''non-controversial'' rule change under paragraph (f)(6) of Rule 19b-4 under the Act,[3] which renders the proposal effective upon receipt of this filing by the Commission. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

FINRA is proposing to adopt NASD Rule 2821 into the Consolidated FINRA Rulebook,[4] as FINRA Rule 2330, without any substantive changes. The text of the proposed rule change is available on FINRA's Web site at *http://www.finra.org,* at the principal office of FINRA and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, FINRA included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. FINRA has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

As part of the process of developing a new consolidated rulebook (''Consolidated FINRA Rulebook''),[5] FINRA is proposing to transfer NASD Rule 2821 into the Consolidated FINRA Rulebook as FINRA Rule 2330. NASD Rule 2821 establishes sales practice standards regarding recommended purchases and exchanges of deferred variable annuities. The rule has six main sections. First, the rule addresses general considerations, such as the rule's applicability. Second, the rule has requirements governing broker recommendations, including suitability and disclosure obligations. Third, the rule includes various principal review and approval obligations. Fourth, the rule requires members to establish and maintain supervisory procedures reasonably designed to achieve compliance with the standards set forth in the rule. Fifth, the rule has a training component. Sixth, the rule has a supplementary material section that addresses a variety of issues ranging from the handling of customer funds and checks to information gathering and sharing.

FINRA seeks to transfer this important sales-practice rule, which the Commission only recently approved,[6] into the Consolidated FINRA Rulebook as FINRA Rule 2330 without any substantive changes. Moving the rule into the Consolidated FINRA Rulebook ensures that the rule's requirements will continue to protect investors and does not impose any significant burden on competition. FINRA notes that FINRA Rule 2330 will apply to broker-dealers

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b-4.

[3] 17 CFR 240.19b-4(f)(6).

[4] *See infra* note 5.

[5] The current FINRA rulebook consists of (1) FINRA Rules; (2) NASD Rules; and (3) rules incorporated from NYSE (''Incorporated NYSE Rules'') (together, the NASD Rules and Incorporated NYSE Rules are referred to as the ''Transitional Rulebook''). While the NASD Rules generally apply to all FINRA members, the Incorporated NYSE Rules apply only to those members of FINRA that are also members of the NYSE (''Dual Members''). The FINRA Rules apply to all FINRA members, unless such rules have a more limited application by their terms. For more information about the rulebook consolidation process, *see Information Notice,* March 12, 2008 (Rulebook Consolidation Process).

[6] *See* Securities Exchange Act Release No. 59772 (April 15, 2009), 74 FR 18419 (April 22, 2009) (approval order); *Regulatory Notice 09–32* (June 2009). *See also* Securities Exchange Act Release No. 56375 (September 7, 2007), 72 FR 52403 (September 13, 2007) (approval order).

in the same manner and to the same extent as NASD Rule 2821.

FINRA has filed the proposed rule change for immediate effectiveness. The implementation date for FINRA Rule 2330 will be February 8, 2010.[7]

2. Statutory Basis

The proposed rule change is consistent with the provisions of Section 15A(b)(6) of the Act,[8] which requires, among other things, that FINRA's rules must be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, and, in general, to protect investors and the public interest. Transferring the rule to the Consolidated FINRA Rulebook is consistent with FINRA's obligations under the Act because the rule enhances members' compliance and supervisory systems and provides more comprehensive and targeted protection to investors in deferred variable annuities.

B. Self-Regulatory Organization's Statement on Burden on Competition

FINRA does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Written comments were neither solicited nor received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule change does not: (i) Significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A) of the Act[9] and Rule 19b–4(f)(6) thereunder.[10]

At any time within 60 days of the filing of the proposed rule change, the Commission may summarily abrogate such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an e-mail to *rule-comments@sec.gov.* Please include File Number SR–FINRA–2009–083 on the subject line.

Paper Comments

- Send paper comments in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–FINRA–2009–083. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying in the Commission's Public Reference Room, 100 F Street, NE., Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filing also will be available for inspection and copying at the principal office of FINRA. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–FINRA–2009–083 and should be submitted on or before January 4, 2010.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[11]

Florence E. Harmon,

Deputy Secretary.

[FR Doc. E9–29526 Filed 12–10–09; 8:45 am]

BILLING CODE 8011–01–P

[7] *See* Securities Exchange Act Release No. 59772 (April 15, 2009), 74 FR 18419 (April 22, 2009) (approval order); *Regulatory Notice 09–32* (June 2009) (announcing SEC approval of amendments to NASD Rule 2821 governing purchases and exchanges of deferred variable annuities and an effective date for those amendments of February 8, 2010).

[8] 15 U.S.C. 78*o*–3(b)(6).

[9] 15 U.S.C. 78s(b)(3)(A).

[10] 17 CFR 240.19b–4(f)(6).

[11] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–61116; File No. SR–FINRA–2009–080]

Self-Regulatory Organizations; Financial Industry Regulatory Authority, Inc.; Notice of Filing of Proposed Rule Change To Adopt FINRA Rule 4570 (Custodian of Books and Records) in the Consolidated FINRA Rulebook

December 4, 2009.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'' or ''SEA'')[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 17, 2009, Financial Industry Regulatory Authority, Inc. (''FINRA'') (f/k/a National Association of Securities Dealers, Inc. (''NASD'')) filed with the Securities and Exchange Commission (''SEC'' or ''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by FINRA. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

FINRA is proposing to adopt NASD Rule 3121 (Custodian of the Record) as FINRA Rule 4570 (Custodian of Books and Records) in the consolidated FINRA rulebook with minor changes.

The text of the proposed rule change is below. Proposed new language is *italicized;* proposed deletions are in brackets:

4500. BOOKS, RECORDS AND REPORTS

* * * * *

[3121]*4570.* Custodian of [the] *Books and* Record*s*

A member who files a [Securities and Exchange Commission] Form BDW shall designate on the Form BDW, as the custodian of the *member's books and* record*s,* a person associated with the

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

member at the time that the Form BDW is filed.

* * * * *

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, FINRA included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. FINRA has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

As part of the process of developing a new consolidated rulebook (''Consolidated FINRA Rulebook''),[3] FINRA is proposing to adopt NASD Rule 3121 as FINRA Rule 4570 in the Consolidated FINRA Rulebook with minor changes as described below.

Background

SEA Rule 17a–4 requires members to retain their books and records for specified retention periods.[4] Pursuant to SEA Rule 17a–4(g), a member that ceases doing business as a registered broker-dealer has a continuing obligation to retain its required books and records for the remainder of the specified retention periods.[5]

To that end, Form BDW (Uniform Request for Broker-Dealer Withdrawal) requires that the member identify and provide the contact information of the person who will have custody of the firm's books and records after the firm has discontinued its business operations. The form also requires that the firm provide the address where the books and records will be located, if different than the custodian's address. In addition, Form BDW provides that the firm and the person signing the form on behalf of the firm must certify that the firm's books and records will be preserved and made available for inspection.

NASD Rule 3121 requires a member to designate as the custodian of its required books and records on Form BDW a person who is associated with the firm at the time Form BDW is filed. The rule, which was approved by the Commission in 2000,[6] is intended to enhance FINRA's ability to obtain required books and records from firms that are no longer conducting business and to ensure that the custodian of the books and records has been subject to certain background checks.[7] There is no comparable Incorporated NYSE Rule.

Proposal

FINRA proposes to adopt NASD Rule 3121 as FINRA Rule 4570 in the Consolidated FINRA Rulebook, with only minor changes. Specifically, NASD Rule 3121 currently states that a member must designate an associated person ''as the custodian of the record''; FINRA proposes to revise the text of the rule to reflect that the associated person is designated ''as the custodian of the member's books and records,'' which is consistent with the terminology used in Form BDW. For similar reasons, FINRA proposes to change the title of the rule from ''Custodian of the Record'' to ''Custodian of Books and Records.''

FINRA will announce the implementation date of the proposed rule change in a *Regulatory Notice* to be published no later than 90 days following Commission approval.

2. Statutory Basis

FINRA believes that the proposed rule change is consistent with the provisions of Section 15A(b)(6) of the Act,[8] which requires, among other things, that FINRA rules must be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, and, in general, to protect investors and the public interest. FINRA believes that the proposed rule change will further the purposes of the Act by, among other things, enhancing FINRA's ability to obtain required books and records from member firms that are no longer conducting business.

B. Self-Regulatory Organization's Statement on Burden on Competition

FINRA does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Written comments were neither solicited nor received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 35 days of the date of publication of this notice in the **Federal Register** or within such longer period (i) as the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) by order approve such proposed rule change, or

(B) institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an e-mail to *rule-comments@sec.gov.* Please include File Number SR–FINRA–2009–080 on the subject line.

Paper Comments

- Send paper comments in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–FINRA–2009–080. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's

[3] The current FINRA rulebook consists of (1) FINRA Rules; (2) NASD Rules; and (3) rules incorporated from NYSE (''Incorporated NYSE Rules'') (together, the NASD Rules and Incorporated NYSE Rules are referred to as the ''Transitional Rulebook''). While the NASD Rules generally apply to all FINRA members, the Incorporated NYSE Rules apply only to those members of FINRA that are also members of the NYSE (''Dual Members''). The FINRA Rules apply to all FINRA members, unless such rules have a more limited application by their terms. For more information about the rulebook consolidation process, *see Information Notice,* March 12, 2008 (Rulebook Consolidation Process).

[4] 17 CFR 240.17a–4.

[5] 17 CFR 240.17a–4(g).

[6] *See* Securities Exchange Act Release No. 43102 (August 1, 2000), 65 FR 48266 (August 7, 2000) (Order Approving File No. SR–NASD–99–76).

[7] For example, associated persons who have custody of a member's original books and records relating to securities or funds are subject to the fingerprinting requirements of SEA Rule 17f–2 for purposes of a criminal background check.

[8] 15 U.S.C. 78*o*–3(b)(6).

Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying in the Commission's Public Reference Room, 100 F Street, NE., Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filing also will be available for inspection and copying at the principal office of FINRA. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–FINRA–2009–080 and should be submitted on or before January 4, 2010.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[9]

Florence E. Harmon,

Deputy Secretary.

[FR Doc. E9–29524 Filed 12–10–09; 8:45 am]

BILLING CODE 8011–01–P

DEPARTMENT OF STATE

[Public Notice 6837]

Bureau of Educational and Cultural Affairs (ECA) Request for Grant Proposals: Open Competition for the Professional Fellows Program

Announcement Type: New Grant.

Funding Opportunity Number: ECA/PE/C–10–01.

Catalog of Federal Domestic Assistance Number: 19.415.

Key Dates:

Application Deadline: February 26, 2010.

Executive Summary: The Office of Citizen Exchanges of the Bureau of Educational and Cultural Affairs (ECA/PE/C) announces an open competition for grants to conduct a Professional Fellows Program in Africa, East Asia, Europe, the Near East, North Africa, South Central Asia and the Western Hemisphere.

U.S. public and non-profit organizations meeting the provisions described in Internal Revenue code section 26 U.S.C. 501(c)(3) may submit proposals that support the goals of the Professional Fellows Program. The goals of the program, which encompass both bureau and programmatic goals, are to: (1) Provide foreign participants from eligible countries the opportunity for professional development through four- to eight-week internships in the U.S.; (2) provide U.S. participants the opportunity to take part in reciprocal fellowships and/or to share their professional expertise with counterparts in eligible countries; (3) promote mutual understanding and partnerships between key professional groups in the United States and counterpart groups in eligible countries. Proposed projects should be two-way exchanges involving participants from both the U.S. and foreign countries.

Projects should take place over the course of one to two years and target current or potential professional leaders who will effect positive change in their communities. Specific themes for consideration under this competition include: Climate change, education to employment, food security, global health, and legislative development. Eligible countries and guidance for each theme are provided in Section I.7 below. Proposals that target themes and countries not specifically authorized in this Request for Grant Proposals will be considered technically ineligible.

Applicants may submit only one proposal under this competition. If multiple proposals are received from the same applicant, all submissions will be declared technically ineligible and receive no further consideration in the review process. No guarantee is made or implied that grants will be awarded in all themes or for all countries listed.

I. Funding Opportunity Description

I.1. Authority

Overall grant making authority for this program is contained in the Mutual Educational and Cultural Exchange Act of 1961, Public Law 87–256, as amended, also known as the Fulbright-Hays Act. The purpose of the Act is ''to enable the Government of the United States to increase mutual understanding between the people of the United States and the people of other countries * * *; to strengthen the ties which unite us with other nations by demonstrating the educational and cultural interests, developments, and achievements of the people of the United States and other nations * * * and thus to assist in the development of friendly, sympathetic and peaceful relations between the United States and the other countries of the world.'' The funding authority for the program above is provided through legislation.

I.2. Purpose and Program Description

The Professional Fellows Program is a two-way exchange involving current or potential professional leaders from both the U.S. and foreign countries who will effect positive change in their communities. Professional Fellows will be focused in the following areas: Climate Change, Education to Employment, Food Security, Global Health, and Legislative Development.

I.3. Participants

For the purposes of this program, ''participants'' are defined as those who travel under grant funding from their country of origin to a designated exchange country. It is acceptable for there to be more foreign participants than American participants under this program model, but applicants are encouraged to include approximately the same number of Americans to emphasize that this program is reciprocal in nature. Foreign participants should be selected through a merit-based, competitive process. They should be up-and-coming and mid-level professionals with experience relevant to one of the specific themes. They should have good interpersonal and communication skills including a command of both oral and written English that will allow them to function effectively and independently in a wide variety of private, public, and professional settings in the U.S. Participants should also have demonstrated leadership abilities and a commitment to or participation in a wider program including alumni projects/affairs.

U.S. participants may include individuals who act as hosts for the foreign participants who come to the United States, as well as professionals from government and civil society organizations with expertise relevant to the project focus. While U.S. participants are not required to have foreign language ability or previous country-specific experience, it is highly recommended.

Applicants should strive to maximize the number of participants and the length of the U.S.-based program given funding levels. Therefore, applicants who engage public and private partners for programming support, and employ other creative techniques to increase or stretch funding dollars will be deemed more competitive than those that do not, under the cost effectiveness and cost-sharing review criteria.

[9] 17 CFR 200.30–3(a)(12).

I.4. Partner Organizations

Applicants must identify the U.S.-based and foreign-based organizations and individuals with whom they are proposing to collaborate and describe previous cooperative activities, if any. Successful proposals will include qualified and established partner organizations/offices in each of the regions where participants are being recruited. Also, proposals must demonstrate capacity in the U.S. to secure relevant placements for foreign participants; proposals that include this information—especially with letters of commitment from possible U.S.-based host organizations—will be deemed more competitive.

I.5. Project Activities

Successful grant applicants must fully demonstrate a capacity to achieve the following key activities:

I.5a. Recruit Foreign Participants

The recipients of this award will recruit and select qualified individuals throughout the target country(ies) for both spring and fall Fellowships. The foreign participants should be selected, with the knowledge and participation of the Public Affairs Section (PAS) of the relevant U.S. Embassy, through a merit-based, competitive process. An in-country or regional partner organization(s)/offices is required to coordinate screening, selecting, and preparing participants prior to departure for the United States including a formal pre-departure orientation program.

I.5b. Facilitate the Visa Process

Working with ECA and PAS for the U.S. visas and directly with the embassy of the partner country for its visas. ECA will issue the DS–2019 forms required for J visas; see Section IV.3d.1 for additional information related to the administration of J visa programs.

I.5c. Arrange all round-trip international travel, complying with the Fly America Act, and domestic travel arrangements for the participants.

I.5d. Conduct U.S. Fellowships

The recipients of this award will be responsible for implementing fellowships from four to eight weeks in the United States for foreign participants. Fellows will be placed within relevant, reputable, legally recognized U.S. organizations where they will gain hands-on experience that will enhance their knowledge, skills, and abilities in their professional field, and provide the opportunity to establish relationships with U.S. professional counterparts for on-going collaboration. The grantee should also strive to include cultural enrichment activities as an integral part of the fellowship experience. Such activities could include outings to museums, historic sites, sporting events, cultural exhibits, local school or community events, volunteering and other opportunities to experience American culture and diversity. Short-term homestays to give participants a personal experience of how typical Americans live are highly desirable. The grantee may want to engage with a partner or sub-grantee to arrange for the internship placement.

I.5e. Conduct an Overseas Program for U.S. Participants

The recipients of this award will conduct an overseas program where U.S. participants, selected for their relevant professional expertise, will travel for two to three weeks to conduct on-site consultancies and joint programming with foreign participants and their colleagues, and, if appropriate or feasible, reciprocal fellowships to share their professional expertise and learn from their counterparts. The overseas program should be designed to engage a broad audience beyond the original foreign participants. Proposals must show a convincing plan to work with a community-based partner overseas to engage a wide range of people and to sustain the program benefits beyond the period of the grant.

I.5f. Conduct a Second Round of U.S. Fellowships and Overseas Programs

Engaging a new group of participants, the recipients of this award will conduct a second round of fellowships and overseas programs of a similar nature as described above.

I.5g. Conduct Orientation and the Professional Fellows Congress

The grantee will also be responsible for conducting a thorough orientation for foreign participants upon their arrival in the United States. At the end of each round of foreign fellowships, a Fellows Congress will be held at the U.S. Department of State. Grantees will work closely with the Office of Citizen Exchanges and other grantee organizations to coordinate this event. Grantees will be responsible for providing transportation, lodging, per diem and miscellaneous expenses for all program fellows under their aegis for a minimum of three days in Washington, DC.

I.5h. Monitor, Evaluate, and Report on Project

The Bureau places high importance on monitoring and evaluation as a means of ensuring and measuring a project's success. Proposals must include a detailed monitoring and evaluation plan that assesses the impact of the project. Please refer to section IV.3d.3. Project Monitoring and Evaluation below.

I.5i. Carry Out Follow-Up Activities

The recipients of this award will develop enhancement activities that reinforce program goals after the participants' return to their home country. This includes informing participants of the Bureau's Alumni program, facilitating their enrollment, and encouraging their on-going participation. Please refer to the PSI for additional information on Alumni, Outreach, and Engagement.

I.5j. Manage all financial aspects of the project, including participant costs and transparent arrangements of sub-grant relationships with partner organizations, if applicable.

I.5k. Design and implement an evaluation plan that assesses the impact of the project.

I.6. Projected Timeline

ECA envisions the approximate dates of the Professional Fellows program to be as follows:

- *September 2010–January 2011:* Recruitment and selection of foreign participants and securing U.S.-based hosts and host sites.
- *March–May 2011:* Travel to the United States by ½ of all the foreign participants to U.S. for orientation and placement at internship sites for a four to eight week program.
- *May 2011:* Travel by the foreign participants to Washington, DC at/towards the end of their U.S.-based program for a two-day enrichment program.
- *June–September 2011:* The U.S. participants who were involved in the spring 2011 hosting will travel overseas for approximately two weeks of programming.
- *October–December 2011:* Travel to the United States by the remaining ½ of all the foreign participants to the U.S. for orientation and placement at internship sites for a four to eight week program.
- *November–December 2011:* Travel by the remaining foreign participants to Washington, DC at/towards the end of their U.S.-based program for a two-day program.
- *January–May 2012:* The U.S. participants who were involved in the fall 2010 hosting will travel overseas for approximately two week program.

I.7. Themes

Specific grant awards will be made for Professional Fellows to be carried out in the following themes and countries:

I.7a. Climate Change Fellows

The Climate Change Fellows program is designed to engage professionals actively involved in exploring the science, impact, adaptation, and actions related to climate change. Participants could include environmental and social scientists, climatologists, ecologists, government officials, disaster responders, community leaders, activists, educators, and NGO workers. Participants will be provided hands-on experience with government agencies, disaster response organizations, NGOs, and advocacy groups in the U.S. addressing the impact of climate change. The Bureau is particularly interested in receiving proposals that promote education and communication campaigns to rural and urban communities most vulnerable to climate risks. For example, a Climate Change Fellows program could foster civic education programs that help students identify environmental problems related to climate change and then work with local officials and non-governmental organizations to find solutions while also providing lessons in free speech, coalition-building and democracy.

I.7a.1. East Asia and Pacific (EAP)

Countries: Proposal with participants from at least four of the following six countries: Australia, China, Indonesia, Japan, Korea and New Zealand.

Program Contact: Adam Meier, tel: (202) 632–6071, e-mail: *meieraw2@state.gov*.

Approximate Grant Award: $400,000–$500,000 for a program involving approximately 40 to 50 participants.

I.7a.2. Western Hemisphere (WHA)

Countries: Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.

- Belize may also be considered, but *only* in combination with at least one of the following other countries: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.

Program Contact: Carol Herrera, tel: (202) 632–6054, e-mail: *herreraca1@state.gov*.

Approximate Grant Award: $400,000–$500,000 for a program involving approximately 40 to 50 participants.

I.7b. Education to Employment Fellows

The Education to Employment Fellows program is designed to engage professionals who are actively involved, in formal or informal settings, in teaching, mentoring, and influencing youth by providing them the guidance, education, training, and skills needed to find meaningful and gainful employment and to become responsible and contributing members of society. Most will be active in the education sector, particularly with educational programs and youth programs geared towards the development of new jobs and employment-based outcomes, such as vocational programs, community colleges, universities, and non-governmental organizations that work with youth. The Education to Employment Fellows program will provide professionals (teachers, youth leaders, community activists who work with youth, university administrators, and staff of NGOs who teach/mentor/influence youth) from identified countries with hands-on experience with the U.S. educational system and aspects of civil society that are geared towards job creation and employment outcomes through fellowships in NGOs, organizations involved in educational reform efforts, local school districts, universities, or educational policy-making bodies across the U.S.

I.7b.1. Near East/North Africa (NEA)

Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, the Palestinian Authority, Syria, Tunisia, Yemen and the countries of the Arabian Gulf. Multi-country project proposals are encouraged; however, single-country proposals will also be considered.

Program Contact: Thomas Johnston, tel: (202) 632–6056, e-mail: *johnstontj@state.gov*.

Approximate Grant Award: $400,000–$500,000 for a program involving approximately 40 to 50 participants.

I.7b.2. East Asia and Pacific (EAP)

Countries: For East Asia and Pacific, proposals for the Education to Employment Fellows program should be specifically focused on connections between universities in the U.S. and East Asia, and should recruit foreign participants from at least five of the following ASEAN countries: Brunei, Burma, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, and Vietnam.

Program Contact: Adam Meier, tel: (202) 632–6071, e-mail: *meieraw2@state.gov*.

Approximate Grant Award: $400,000–$500,000 for a program involving approximately 40 to 50 participants.

I.7b.3. Ngwang Choephel Fellows Program

Countries: Ngwang Choephel Fellows Program: Proposals for the Tibetan Autonomous Region or Tibetan areas of China should be designed to carry out a two-way Professional Fellows program under the Education to Employment theme as described. It is expected that there will only be one cycle of fellowships under this program, as opposed to the two cycles described in the Professional Fellows program overview. The employment outcomes on which the proposals focus could, for example, include economic activity related to cultural preservation and eco-tourism. Proposals should incorporate alternate plans into their narrative in anticipation of any difficulties of participants traveling to or from the Tibetan Autonomous Region or the Tibetan areas of China.

Program Contact: Linnéa Allison, tel: (202) 632–6060, e-mail: *AllisonLE@state.gov*.

Approximate Grant Awards for Ngwang Choephel Fellows Program: $200,000–$225,000 for a program involving approximately 20–30 participants.

I.7c. Food Security Fellows

The Food Security Fellows program will focus on political, social, and economic factors affecting food security, but not technical factors. The Food Security Fellows program is designed to engage professionals who are actively involved with facets of food production, delivery, education, and advocacy efforts. Participants should include one or more of the following:

- Agricultural experts and officials who develop and implement plans to improve food production and equitable distribution, without environmental degradation.
- Nutritionists and dietitians who educate people about food needs and the worth of different foods.
- Community leaders who promote the development of community gardens and farmers' markets.
- Media professionals who educate the public about food through writings, radio, television, or the Internet to promote food safety and storage, good nutrition, and information on food availability.
- National, regional, and local policymakers who are dealing with legislative and regulatory aspects of food production and distribution, including land management.

I.7c.1. Sub-Saharan Africa (AF)

Countries: Proposals should involve both Kenya and Uganda.

Program Contact: Jim Ogul, tel: (202) 632–6055, e-mail: *ogulje@state.gov*.

Approximate Grant Award: $400,000–$500,000 for a program involving approximately 40 to 50 participants.

I.7d. Global Health Fellows

The Global Health Fellows program is designed to engage professionals who are actively involved in health care for marginalized populations at the grassroots level, particularly with a focus on maternal and child health. Participants could include nurses, public health officials, paramedics, and midwives, as well as health-focused community leaders, activists, educators, NGO workers, and media specialists. Participants will be provided hands-on experience in public health organizations and advocacy groups in the U.S. that serve disadvantaged urban and rural communities. The Bureau is particularly interested in receiving proposals focused on public health strategies and communication that incorporate media and specifically radio, to educate women and children in such areas as reproductive health, nutrition, hygiene, and sanitation. This program is not designed to include medical training.

I.7d.1. Sub-Saharan Africa (AF)

Countries: Proposals should involve both Malawi and Zambia.

Program Contact: Curt Huff, tel: (202) 632–6053, e-mail: *huffce@state.gov*.

I.7d.2. Near East/North Africa (NEA)

Egypt, Israel, Jordan, Libya, Morocco, Oman, the Palestinian Authority, Syria, and Yemen. Multi-country project proposals are encouraged; however, single-country proposals will also be considered.

Program Contact: Thomas Johnston, tel: (202) 632–6056, e-mail: *johnstontj@state.gov*.

I.7d.3. Western Hemisphere (WHA)

Countries: Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, and Trinidad and Tobago.

- Belize may also be considered, but only in combination with at least one of the following other countries: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.
- For proposals involving Haiti or the Dominican Republic, projects that combine work in both countries are encouraged.

Program Contact: Carol Herrera, tel: (202) 632–6054, e-mail: *herreraca1@state.gov*.

Approximate Grant Award: $400,000–$500,000 for a program involving approximately 40 to 50 participants.

I.7e. Legislative Fellows

The Legislative Fellows Program is designed to strengthen understanding of the U.S. legislative process and enhance appreciation of the role of civic society and its engagement in the political process. The Legislative Fellows Program will provide professionals from identified countries with hands-on exposure to the U.S. political process through fellowships in U.S. Congressional offices (including state/district offices), state legislatures, city councils/local government bodies, and advocacy organizations across the U.S. The program will also involve U.S. participants who will be selected from staff members at the various fellowship sites who will act as primary host/mentors to the foreign fellows during their U.S.-based program. After the fellowships are completed, these U.S. staff members will travel overseas to the fellows' home countries to continue their engagement by participating in joint outreach activities, engaging the local media, and on-site consultancies and presentations to wider audiences. Participants should have demonstrated leadership abilities and a commitment to or participation in the political process or policy-making through involvement in civic education activities, citizen advocacy groups, political campaigns, political parties, or election monitoring. U.S. participants will be staff members of the U.S. Congress, state legislatures, city councils/local governments, and advocacy groups who act as hosts for foreign participants during the inbound portion of the program.

I.7e.1. Europe (EUR)

Countries: Georgia, Russia, Turkey and Ukraine. All four countries must be included in the proposal with the following distribution: 40% of the foreign participants must be recruited from Russia. 20% of the participants must be recruited from Ukraine, 20% must be recruited from Georgia, and 20% from Turkey. Placements may be considered at the Federal, regional or local level and should be consistent with the participant's professional experience. Placements with advocacy organizations involved with the legislative process, (particularly those dealing with climate change, women's and children's health, and food security issues) are also eligible.

Approximate Grant Award: $800,000 to $1,000,000 for a program involving approximately 90 to 100 total participants.

Program Contact: Linnéa Allison, tel: (202) 632–6060, e-mail: *AllisonLE@state.gov*.

I.7e.2. South and Central Asia (SCA)

Countries: Bangladesh, Kazakhstan, Kyrgyzstan, Nepal, Sri Lanka, and Tajikistan. All six countries must be included in the proposal with roughly the same number of participants coming from each. Placements may be considered at the Federal, regional or local level and should be consistent with the participant's professional experience. Placements with advocacy organizations involved with the legislative process, (particularly those dealing with climate change, women's and children's health, and food security issues) are also eligible.

Approximate Grant Award: $800,000 to $1,000,000 for a program involving approximately 90 to 100 total participants.

Program Contact: Brent Beemer, tel: (202) 632–6067, e-mail: *BeemerBT@state.gov*.

I.8. What to Include in Your Proposal

I.8a. Executive Summary

The Executive Summary should be one-page in length and include the project title, the goals of the project, the target countries, the names of all partner organizations responsible for program implementation, the numbers of participants, both foreign and American, and the number of proposed exchanges and approximate dates.

I.8b. Proposal Narrative

In 20, double-spaced pages the narrative should include:

I.8b.1. Project Goals, Objectives, Anticipated Outcomes

A clear, succinct statement of project goals, objectives and anticipated outcomes that responds to Bureau goals as listed in this RFGP. Objectives should be described in specific, measurable, and realistic terms that are achievable within the scope of the project, both in terms of time and funding. Specify the project's broader objectives in terms of bureau and overarching program outcomes. Then delineate the project's main objectives (no more than five) and outcomes you expect as a result of your project's activities. For each outcome, please state the time frame for achievement. They should be guided by one or more of the following questions. (Please see section III.3d.3. Project Monitoring and Evaluation for assistance in identifying and defining outcomes.)

1. What specifically will participants, U.S. and foreign, learn as a result of this project?

2. What new attitudes will participants, U.S. and foreign, develop, or what new ideas will they encounter as a result of this project?

3. How will the participants' behavior change as a result of this project? What new actions will they take?

4. Will participants be a catalyst for change in their schools, work-places, communities, or institutions? How so?

Proposals that clearly delineate salient objectives in measurable terms and plan activities in a sequence that will progressively lead to achieving those objectives, will be considered more competitive.

I.8b.2. Background Information on Implementing Organizations

Information on all organizations and staff involved in the implementation of the project including the mission, relevant expertise in the project theme and country(ies), past activities and accomplishments, on-going and planned activities not including the proposed project. Previous grants received from the Bureau should be listed by office (Citizen Exchanges, International Visitors, Academic Exchanges, etc.) project name, countries, year, and amount.

I.8b.3. Roles and Responsibilities

A clear delineation of the roles and responsibilities of all partner organizations in terms of project logistics, management, and oversight. Letters of agreement and/or sub award agreements with accompanying budgets should be included under Tab E of the submission.

I.8b.4. Project Management Plan

A simple project management plan for the two-year life of the project that lists, in table form, dates, items (major events or tasks), and the person or group responsible.

I.8b.5. Support of Diversity

A description on how the Bureau's policy on Support of Diversity will be integrated into the project. Please refer to guidance in PSI under ''Diversity, Freedom and Democracy Guidelines.''

I.8b.6. Post-Grant Plan

A post-grant plan that demonstrates how the grantee and participants will collaborate and communicate after the ECA-funded grant has concluded.

I.8b.7. Evaluation Plan

An evaluation plan that follows the guidance provided in this RFGP. Please refer to section III.3d.3. ''Project Evaluation'' below. Detailed evaluation plans that put the narrative over the 20-page limit and sample surveys or other evaluation tools may be included in TAB E.

I.8b.8. Budget.

Please refer to section IV.3e. Budget Submission in this document and the PSI for guidance on preparing your budget.

I.8b.9. Working with the Public Affairs Section

An acknowledgement to consult closely with the Public Affairs Section of the U.S. Embassy in the relevant country(ies) to develop plans for project implementation, to select project participants, and to invite representatives of the Embassy(ies) and/or consulate(s) to participate in program sessions or site visits.

I.8b.10. Acknowledging ECA's Financial Support

An acknowledgement to follow guidance in the PSI entitled ''Acknowledgement of ECA's Financial Support and Use of the Department Seal''.

I.8b.11. Alumni Outreach

An acknowledgement to comply with ''ECA's General Policy Guidance on Alumni Outreach/Follow-on and Engagement'' provided in the PSI.

I.8c Attachments

I.8c.1. Resumes

Resumes of principal staff of all partner organizations involved in the implementation of the project should be included in TAB E.

I.8c.2. Letters of Commitment and/or Letters of Support

Letters of commitment or support from partner organizations partner institutions should demonstrate a capacity to arrange and conduct U.S. and overseas activities and should also be included in TAB E.

I.8c.3. Program Materials

Materials that advance program design and implementation should be included in TAB E. These could include:

1. Draft agendas of professional workshops, conferences and seminars including pre-departure, orientation and final conference activities.

2. Draft application and recruitment materials

3. Draft selection and interview materials

4. Outline of proposed alumni programming

5. Sample evaluation and survey instruments

6. Timeline for program implementation

7. Program promotional materials

I.8c.4. Unsolicited Documents

Attachments that do not directly address the proposed project or explicitly demonstrate relevant past performance (*i.e.,* generic organization brochures, pamphlets, unsolicited reports) are discouraged.

II. Award Information

Type of Award: Grant Agreement.
Fiscal Year Funds: 2010.
Approximate Total Funding: $5,200,000.
Approximate Number of Awards: 10–15.
Approximate Average Award: $400,000–$500,000, except Legislative Fellows grants which will average $800,000–$1,000,000.
Anticipated Award Date: Pending availability of funds, September 1, 2010.
Anticipated Project Completion Date: August 31, 2012.

III. Eligibility Information

III.1. Eligible Applicants

Applications may be submitted by public and private non-profit organizations meeting the provisions described in Internal Revenue Code section 26 USC 501(c)(3).

III.2. Cost-Sharing or Matching Funds

There is no minimum or maximum percentage required for this competition. However, the Bureau encourages applicants to provide maximum levels of cost-sharing and funding in support of its programs.

When cost-sharing is offered, it is understood and agreed that the applicant must provide the amount of cost-sharing as stipulated in its proposal and later included in an approved agreement. Cost sharing may be in the form of allowable direct or indirect costs. For accountability, you must maintain written records to support all costs which are claimed as your contribution, as well as costs to be paid by the Federal government. Such records are subject to audit. The basis for determining the value of cash and in-kind contributions must be in accordance with OMB Circular A–110, (Revised), Subpart C.23—Cost Sharing and Matching. In the event you do not provide the minimum amount of cost-sharing as stipulated in the approved budget, ECA's contribution will be reduced in like proportion.

III.3. Four Years of Exchange Experience

Bureau grant guidelines require that organizations with less than four years experience in conducting international exchanges be limited to $60,000 in Bureau funding. ECA anticipates making awards in an amount from $300,000 and higher to support program and administrative costs required to implement the programs in this RFGP. Therefore, organizations with less than four years experience in conducting international exchanges are ineligible to apply under this competition. The Bureau encourages applicants to provide maximum levels of cost-sharing and funding in support of its programs.

III.4. Technical Eligibility

All proposals must comply with the following or they will result in your proposal being declared technically ineligible and given no further consideration in the review process.

- Eligible applicants may not submit more than one proposal under this competition.
- An applicant organization is defined by the DUNS number of the organization and by the signature of the authorized representative contained on the ''Application for Federal Assistance Form'' (SF–424) submitted under this competition.
- Eligible applicants may only propose working with the countries and themes listed under each of the themes of this RFGP.
- No funding is available to send U.S. citizens exclusively to conferences or conference type seminars overseas; nor is funding available for bringing foreign nationals exclusively to conferences or to routine professional association meetings in the United States.
- Please refer to the Proposal Submission Instruction (PSI) document for additional requirements.

IV. Application and Submission Information

Note: Please read the complete Solicitation Package before sending inquiries or submitting proposals. All applicants are strongly encouraged to consult with the Washington, DC-based State Department contact for the themes/regions listed in this solicitation. Applicants are also strongly encouraged to consult with Public Affairs Officers at U.S. Embassies in relevant countries as they develop proposals responding to this RFGP. Once the RFGP deadline has passed, Bureau and Embassy staff may not discuss this competition with applicants until the proposal review process has been completed.

IV.1. Contact Information to Request a Solicitation Package

Please contact David Gustafson in the Office of Citizen Exchanges, ECA/PE/C, U.S. Department of State, SA–5, 3rd Floor, 2200 C St., NW., Washington, DC 20522–0503, ph: (202) 632–6083, *GustafsonDP@state.gov* to request a Solicitation Package. Please refer to the Funding Opportunity Number ECA/PE/C–10–01 located at the top of this announcement when making your request. An electronic solicitation package may be obtained from *http://www.grants.gov.* Please see section IV.3f for further information.

IV.2. To Download a Solicitation Package Via the Internet

The entire Solicitation Package may be downloaded from the Bureau's Web site at *http://exchanges.state.gov/* or from the Grants.gov Web site at *http://www.grants.gov.* Please read all information before downloading.

IV.3. Content and Form of Submission

Applicants must follow all instructions in the Solicitation Package. The Solicitation Package includes both the Request for Grant Proposals (RFGP) and the Proposal Submission Instruction (PSI) document, which consists of required application forms, and standard guidelines for proposal preparation. Applicants should assure that proposals respond to guidance provided in both documents.

IV.3a. DUNS Number

You are required to have a Dun and Bradstreet Data Universal Numbering System (DUNS) number to apply for a grant or cooperative agreement from the U.S. Government. This number is a nine-digit identification number, which uniquely identifies business entities. Obtaining a DUNS number is easy and there is no charge.

To obtain a DUNS number, go to *http://www.dunandbradstreet.com* or call 1–866–705–5711. Please ensure that your DUNS number is included in the appropriate box of the SF–424 which is part of the formal application package.

IV.3b. Proposal Components

All proposals must contain an executive summary, proposal narrative and budget. Please Refer to the Solicitation Package. It contains the mandatory Proposal Submission Instructions (PSI) document for additional formatting and technical requirements.

IV.3c. Non-Profit Status and Documentation

You must have nonprofit status with the IRS at the time of application.

Please note: Effective January 7, 2009, all applicants for ECA federal assistance awards must include in their application the names of directors and/or senior executives (current officers, trustees, and key employees, regardless of amount of compensation). In fulfilling this requirement, applicants must submit information in one of the following ways:

(1) Those who file Internal Revenue Service Form 990, ''Return of Organization Exempt From Income Tax,'' must include a copy of relevant portions of this form.

(2) Those who do not file IRS Form 990 must submit information above in the format of their choice.

In addition to final program reporting requirements, award recipients will also be required to submit a one-page document, derived from their program reports, listing and describing their grant activities. For award recipients, the names of directors and/or senior executives (current officers, trustees, and key employees), as well as the one-page description of grant activities, will be transmitted by the State Department to OMB, along with other information required by the Federal Funding Accountability and Transparency Act (FFATA), and will be made available to the public by the Office of Management and Budget on its USASpending.gov Web site as part of ECA's FFATA reporting requirements.

If your organization is a private nonprofit which has not received a grant or cooperative agreement from ECA in the past three years, or if your organization received nonprofit status from the IRS within the past four years, you must submit the necessary documentation to verify nonprofit status as directed in the PSI document. Failure to do so will cause your proposal to be declared technically ineligible.

IV.3d. Additional Information

IV.3d.1. Adherence to All Regulations Governing the J Visa

The Office of Citizen Exchanges of the Bureau of Educational and Cultural Affairs is the official program sponsor of the exchange program covered by this RFGP, and an employee of the Bureau will be the ''Responsible Officer'' for the program under the terms of 22 CFR 62, which covers the administration of the Exchange Visitor Program (J visa program). Under the terms of 22 CFR 62, organizations receiving awards (either a grant or cooperative agreement) under this RFGP will be third parties ''cooperating with or assisting the sponsor in the conduct of the sponsor's

program.'' The actions of recipient organizations shall be ''imputed to the sponsor in evaluating the sponsor's compliance with'' 22 CFR 62. Therefore, the Bureau expects that any organization receiving an award under this competition will render all assistance necessary to enable the Bureau to fully comply with 22 CFR 62 *et seq.*

The Bureau of Educational and Cultural Affairs places critically important emphases on the secure and proper administration of Exchange Visitor (J visa) Programs and adherence by recipient organizations and program participants to all regulations governing the J visa program status. Therefore, proposals should explicitly state in writing that the applicant is prepared to assist the Bureau in meeting all requirements governing the administration of Exchange Visitor Programs as set forth in 22 CFR 62. If your organization has experience as a designated Exchange Visitor Program Sponsor, the applicant should discuss their record of compliance with 22 CFR 62 *et seq.,* including the oversight of their Responsible Officers and Alternate Responsible Officers, screening and selection of program participants, provision of pre-arrival information and orientation to participants, monitoring of participants, proper maintenance and security of forms, recordkeeping, reporting and other requirements. The Office of Citizen Exchanges of ECA will be responsible for issuing DS–2019 forms to participants in this program. A copy of the complete regulations governing the administration of Exchange Visitor (J) programs is available at: *http://travel.state.gov/visa/temp/types/types_1267.html* or from: United States Department of State, Office of Exchange Coordination and Designation, (ECA/EC/D), SA–5, Floor C2, Department of State, Washington, DC 20522–0582.

IV.3d.2. Diversity, Freedom and Democracy Guidelines

Pursuant to the Bureau's authorizing legislation, programs must maintain a non-political character and should be balanced and representative of the diversity of American political, social, and cultural life. ''Diversity'' should be interpreted in the broadest sense and encompass differences including, but not limited to ethnicity, race, gender, religion, geographic location, socio-economic status, and disabilities. Applicants are strongly encouraged to adhere to the advancement of this principle both in program administration and in program content. Please refer to the review criteria under the 'Support for Diversity' section for specific suggestions on incorporating diversity into your proposal. Public Law 104–319 provides that ''in carrying out programs of educational and cultural exchange in countries whose people do not fully enjoy freedom and democracy,'' the Bureau ''shall take appropriate steps to provide opportunities for participation in such programs to human rights and democracy leaders of such countries.'' Public Law 106–113 requires that the governments of the countries described above do not have inappropriate influence in the selection process. Proposals should reflect advancement of these goals in their program contents, to the full extent deemed feasible.

IV.3d.3. Project Monitoring and Evaluation

This section of the RFGP amplifies the direction given in section I above on proposal framework, which calls for the delineation of objectives and planning for baseline, short term and long term outcome measurement. Proposals must include a plan to monitor and evaluate the project's success, both as the activities unfold, at the end of the project and beyond. The Bureau recommends that each proposal include a draft survey questionnaire or other instruments plus a description of a methodology to use to link outcomes to original project objectives. The Bureau expects that the grantee will track participants or partners and be able to respond to key evaluation questions, including satisfaction with the project, learning as a result of the project, changes in behavior as a result of the project, and effects of the project on institutions (institutions in which participants work or partner institutions). The evaluation plan should include indicators that measure gains in mutual understanding as well as substantive knowledge.

Successful monitoring and evaluation depend heavily on setting clear goals and intended outcomes at the outset of a project. Your evaluation plan should include a description of your project's objectives, your anticipated project outcomes, and how and when you intend to measure these outcomes (performance indicators). (Note the call for measurements at the baseline and for short term and longer-term outcomes.) The more that outcomes are ''smart'' (specific, measurable, attainable, results-oriented, and placed in a reasonable time frame), the easier it will be to conduct the evaluation. You should also show how your project objectives link to the goals of the program described in this RFGP and to the Bureau goals.

Your monitoring and evaluation plan should clearly distinguish between project *outputs* and *outcomes. Outputs* are products and services delivered, often stated as an amount. Output information is important to show the scope or size of project activities, but it cannot substitute for information about progress towards outcomes or the results achieved. Examples of outputs include the number of people trained or the number of seminars conducted. *Outcomes,* in contrast, represent specific results a project is intended to achieve and is usually measured as an extent of change. Findings on outputs and outcomes should both be reported, but the emphasis should be on outcomes.

We encourage you to assess the following four levels of outcomes, as they relate to the program goals set out in the RFGP (listed here in increasing order of impact):

1. Participant satisfaction with the project and exchange experience.

2. Participant learning, such as increased knowledge, aptitude, skills, and changed understanding and attitude. Learning includes both substantive (subject-specific) learning and mutual understanding.

3. Participant behavior, concrete actions to apply knowledge in work or community; greater participation and responsibility in civic organizations; interpretation and explanation of experiences and new knowledge gained; continued contacts between participants, community members, and others.

4. Institutional changes, such as increased collaboration and partnerships, policy reforms, new programming, and organizational improvements.

Please Note: Consideration should be given to the appropriate timing of data collection for each level of outcome. For example, satisfaction is usually captured as a short-term outcome, whereas behavior and institutional changes are normally considered longer-term outcomes. Overall, the quality of each monitoring and evaluation plan will be judged on how well it (1) specifies intended outcomes; (2) gives clear descriptions of how each outcome will be measured; (3) identifies when particular outcomes will be measured; and (4) provides a clear description of the data collection strategies for each outcome (*e.g.,* surveys, interviews, tests, or focus groups). (Please note that evaluation plans that deal only with the first level of outcomes [satisfaction] will be deemed less competitive under the present evaluation criteria.)

Grantees will be required to provide reports analyzing their evaluation findings to the Bureau in their regular project reports. All data collected,

including survey responses and contact information, must be maintained for a minimum of three years and provided to the Bureau upon request.

IV.3e. Budget Submission

Please follow the guidelines in this section and consult the PSI when preparing the budget submission.

IV.3e.1. Form SF–424A

Applicants must submit SF–424A—''Budget Information—Non-Construction Programs'' along with a comprehensive budget for the entire program. There must be a summary budget as well as breakdowns reflecting both administrative and program budgets. Applicants may provide separate sub-budgets for each program component, phase, location, or activity to provide clarification. The budget submission should be accompanied by a budget narrative that explains anything that is not readily apparent from the budget.

IV.3e.2. Allowable Costs

Allowable costs for the program include the following:

IV.3e.2a. Travel. International and domestic airfare; airline baggage and seat fees; visas; transit costs; ground transportation costs. Please note that all air travel must be in compliance with the Fly America Act. There is no charge for J–1 visas for participants in Bureau sponsored programs.

IV.3e.2b. Per Diem. For U.S.-based programming, organizations should use the published Federal per diem rates for individual U.S. cities. *Domestic per diem rates* may be accessed at: *http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_BASIC&contentId=17943.* ECA requests applicants to budget realistic costs that reflect the local economy and do not exceed Federal per diem rates. *Foreign per diem rates* can be accessed at: *http://aoprals.state.gov/content.asp?content_id=184&menu_id=78*

IV.3e.2c. Interpreters. We anticipate that all participants coming to the U.S. on this program will have command of both oral and written English that will allow them to function effectively and independently in a wide variety of private, public, and professional settings in the U.S. However, if special circumstances warrant the use of interpretation, ECA strongly encourages applicants to hire their own locally based interpreters but may ask ECA to assign State Department interpreters. One interpreter is typically needed for every four participants who require interpretation. When an applicant proposes to use State Department interpreters, the following expenses should be included in the budget: Published Federal per diem rates (both ''lodging'' and ''M&IE'') and ''home-program-home'' transportation in the amount of $400 per interpreter. Salary expenses for State Department interpreters will be covered by the Bureau and should not be part of an applicant's proposed budget. Bureau funds cannot support interpreters who accompany delegations from their home country or travel internationally.

IV.3e.2d. Book and Cultural Allowances. Foreign participants are entitled to a one-time cultural allowance of $150 per person, plus a book allowance of $50. Interpreters should be reimbursed up to $150 for expenses when they escort participants to cultural events. U.S. program staff, trainers or participants are not eligible to receive these benefits.

IV.3e.2e. Consultants. Consultants may be used to provide specialized expertise or to make presentations. Honoraria rates should not exceed $250 per day. Organizations are encouraged to cost-share rates that would exceed that figure. Subcontracting organizations may also be employed, in which case the written agreement between the prospective grantee and sub-grantee should be included in the proposal. Such sub-grants should detail the division of responsibilities and proposed costs, and subcontracts should be itemized in the budget.

IV.3e.2f. Room rental. The rental of meeting space should not exceed $250 per day. Any rates that exceed this amount should be cost shared.

IV.3e.2g. Materials. Proposals may contain costs to purchase, develop and translate materials for participants. Costs for high quality translation of materials should be anticipated and included in the budget. Grantee organizations should expect to submit a copy of all program materials to ECA, and ECA support should be acknowledged on all materials developed with its funding.

IV.3e.2h. Equipment. Applicants may propose to use grant funds to purchase equipment, such as computers and printers; these costs should be justified in the budget narrative. Costs for furniture are not allowed.

IV.3e.2i. Working meal. Normally, no more than one working meal may be provided during the program. Per capita costs may not exceed $15–$25 for lunch and $20–$35 for dinner, excluding room rental. The number of invited guests may not exceed participants by more than a factor of two-to-one. When setting up a budget, interpreters should be considered ''participants.''

IV.3e.2j. Return travel allowance. A return travel allowance of $70 for each foreign participant may be included in the budget. This allowance would cover incidental expenses incurred during international travel.

IV.3e.2k. Health Insurance. Foreign participants will be covered during their participation in the program by the ECA-sponsored Accident and Sickness Program for Exchanges (ASPE), for which the grantee must enroll them. Details of that policy can be provided by the contact officers identified in this solicitation. The premium is paid by ECA and should not be included in the grant proposal budget. However, applicants are permitted to include costs for travel insurance for U.S. participants in the budget.

IV.3e.2l. Wire transfer fees. When necessary, applicants may include costs to transfer funds to partner organizations overseas. Grantees are urged to research applicable taxes that may be imposed on these transfers by host governments.

IV.3e.2m. In-country travel costs for visa processing purposes. Given the requirements associated with obtaining J–1 visas for ECA-supported participants, applicants should include costs for any travel associated with visa interviews or DS–2019 pick-up.

IV.3e.2n. Administrative Costs. Costs necessary for the effective administration of the program may include salaries for grantee organization employees, benefits, and other direct and indirect costs per detailed instructions in the Application Package. While there is no rigid ratio of administrative to program costs, proposals in which the administrative costs do not exceed 25% of the total requested ECA grant funds will be more competitive under the cost effectiveness and cost sharing criterion, per item V.1 below. Proposals should show strong administrative cost sharing contributions from the applicant, the in-country partner and other sources. Please also include in the administrative portion of your budget plans to travel to Washington, DC, to meet with your program officer within the first 45 days after the grant has been awarded.

IV.3f. Application Deadline and Methods Of Submission

Application Deadline Date: February 26, 2010.

Reference Number: ECA/PE/C–10–01.

Methods of Submission: Applications may be submitted in one of two ways:

(1.) In hard-copy, via a nationally recognized overnight delivery service (*i.e.,* Federal Express, UPS, Airborne

Express, or U.S. Postal Service Express Overnight Mail, etc.), or

(2.) Electronically through *http://www.grants.gov.* Along with the Project Title, all applicants must enter the above Reference Number in Box 11 on the SF–424 contained in the mandatory Proposal Submission Instructions (PSI) of the solicitation document.

IV.3f.1 Submitting Printed Applications

Applications must be shipped no later than the above deadline. Delivery services used by applicants must have in-place, centralized shipping identification and tracking systems that may be accessed via the Internet and delivery people who are identifiable by commonly recognized uniforms and delivery vehicles. Proposals shipped on or before the above deadline but received at ECA more than seven days after the deadline will be ineligible for further consideration under this competition. Proposals shipped after the established deadlines are ineligible for consideration under this competition. ECA will *not* notify you upon receipt of application. It is each applicant's responsibility to ensure that each package is marked with a legible tracking number and to monitor/confirm delivery to ECA via the Internet. Delivery of proposal packages *may not* be made via local courier service or in person for this competition. Faxed documents will not be accepted at any time. Only proposals submitted as stated above will be considered.

Important Note: When preparing your submission please make sure to include one extra copy of the completed SF–424 form and place it in an envelope addressed to ''ECA/EX/PM''.

The original and eight (8) copies of the application should be sent to: Program Management Division, ECA–IIP/EX/PM, Ref.: ECA/PE/C–10–01, SA–5, Floor 4, Department of State, 2200 C Street, NW., Washington, DC 20522–0504.

Applicants submitting hard-copy applications must also submit the ''Executive Summary'' and ''Proposal Narrative'' sections of the proposal in text (.txt) or Microsoft Word format on CD–ROM. As appropriate, the Bureau will provide these files electronically to Public Affairs Section(s) at the U.S. embassy(ies) for its(their) review.

IV.3f.1 Submitting Printed Applications

Applications must be shipped no later than the above deadline. Delivery services used by applicants must have in-place, centralized shipping identification and tracking systems that may be accessed via the Internet and delivery people who are identifiable by commonly recognized uniforms and delivery vehicles. Proposals shipped on or before the above deadline but received at ECA more than seven days after the deadline will be ineligible for further consideration under this competition. Proposals shipped after the established deadlines are ineligible for consideration under this competition. ECA will not notify you upon receipt of application. It is each applicant's responsibility to ensure that each package is marked with a legible tracking number and to monitor/confirm delivery to ECA via the Internet. Delivery of proposal packages may not be made via local courier service or in person for this competition. Faxed documents will not be accepted at any time. Only proposals submitted as stated above will be considered.

Important Note: When preparing your submission please make sure to include one extra copy of the completed SF–424 form and place it in an envelope addressed to ''ECA/EX/PM''.

The original and eight (8) copies of the application should be sent to: Program Management Division, ECA–IIP/EX/PM, Ref.: ECA/PE/C–10–01, SA–5, Floor 4, Department of State, 2200 C Street, NW., Washington, DC 20522–0504.

Applicants submitting hard-copy applications must also submit the ''Executive Summary'' and ''Proposal Narrative'' sections of the proposal in text (.txt) or Microsoft Word format on CD–ROM. As appropriate, the Bureau will provide these files electronically to U.S. Embassy Public Affairs Section(s) for review.

IV.3f.2. Submitting Electronic Applications

Applicants have the option of submitting proposals electronically through Grants.gov (*http://www.grants.gov*). Complete solicitation packages are available at Grants.gov in the ''Find'' portion of the system.

Please Note: Due to Recovery Act related opportunities, there has been a higher than usual volume of grant proposals submitted through *Grants.gov.* Potential applicants are advised that the increased volume may affect the grants.gov proposal submission process. As stated in this RFGP, ECA bears no responsibility for applicant timeliness of submission or data errors resulting from transmission or conversion processes for proposals submitted via Grants.gov.

Please follow the instructions available in the 'Get Started' portion of the site (*http://www.grants.gov/GetStarted*). Several of the steps in the Grants.gov registration process could take several weeks. Therefore, applicants should check with appropriate staff within their organizations immediately after reviewing this RFGP to confirm or determine their registration status with Grants.gov.

Once registered, the amount of time it can take to upload an application will vary depending on a variety of factors including the size of the application and the speed of your internet connection. In addition, validation of an electronic submission via Grants.gov can take up to two business days. Therefore, we strongly recommend that you not wait until the application deadline to begin the submission process through Grants.gov. The Grants.gov Web site includes extensive information on all phases/aspects of the Grants.gov process, including an extensive section on frequently asked questions, located under the ''For Applicants'' section of the Web site. ECA strongly recommends that all potential applicants review thoroughly the Grants.gov Web site, well in advance of submitting a proposal through the Grants.gov system. ECA bears no responsibility for data errors resulting from transmission or conversion processes. Direct all questions regarding Grants.gov registration and submission to: Grants.gov Customer Support, Contact Center Phone: 800–518–4726. Business Hours: Monday–Friday, 7 a.m.–9 p.m. Eastern Time. E-mail: *support@grants.gov.*

Applicants have until midnight (12 a.m.), Washington, DC time of the closing date to ensure that their entire application has been uploaded to the Grants.gov site. There are no exceptions to the above deadline. Applications uploaded to the site after midnight of the application deadline date will be automatically rejected by the grants.gov system, and will be technically ineligible.

V. Application Review Information

V.1. Review Process

The Bureau will review all proposals for technical eligibility. Proposals will be deemed ineligible if they do not fully adhere to the guidelines stated herein and in the Solicitation Package. All eligible proposals will be reviewed by the program office, as well as the Public Diplomacy section overseas, where appropriate. Eligible proposals will be subject to compliance with Federal and Bureau regulations and guidelines and forwarded to Bureau grant panels for advisory review. Proposals may also be reviewed by the Office of the Legal Adviser or by other Department

elements. Final funding decisions are at the discretion of the Department of State's Assistant Secretary for Educational and Cultural Affairs. Final technical authority for assistance award grants resides with the Bureau's Grants Officer.

V.2 Review Criteria

Technically eligible applications will be competitively reviewed according to the criteria stated below. These criteria are not rank ordered and all carry equal weight in the proposal evaluation:

V.2a. Quality of Program Idea

Proposals should exhibit originality, substance, precision, and relevance to the Bureau's mission.

V.2b. Program Planning and Ability to Achieve Objectives

Program objectives should be stated clearly and should reflect the applicant's expertise in the subject area and region. Objectives should respond to the topics in this announcement and should relate to the current conditions in the target country/countries. A detailed agenda and relevant work plan should explain how objectives will be achieved and should include a timetable for completion of major tasks.

The substance of workshops, internships, seminars and/or consulting should be described in detail. Sample schedules should be outlined. Responsibilities of proposed in-country partners should be clearly described. A discussion of how the applicant intends to address language issues should be included, if needed.

V.2c. Institutional Capacity and Track Record

Proposals should include (1) The institution's mission and date of establishment; (2) detailed information about proposed in-country partner(s) and the history of the partnership; (3) an outline of prior awards—U.S. government and/or private support received for the target theme/country/region; and (4) descriptions of experienced staff members who will implement the program. The proposal should reflect the institution's expertise in the subject area and knowledge of the conditions in the target country/countries. Proposals should demonstrate an institutional record of successful exchange programs, including responsible fiscal management and full compliance with all reporting requirements for past Bureau grants as determined by Bureau Grants Staff. The Bureau will consider the past performance of prior recipients and the demonstrated potential of new applicants. Proposed personnel and institutional resources should be adequate and appropriate to achieve the program's goals. The Bureau strongly encourages applicants to submit letters of support from proposed in-country partners.

V.2d. Cost Effectiveness and Cost Sharing

Overhead and administrative costs in the proposal budget, including salaries, honoraria and subcontracts for services, should be kept to a minimum. Proposals in which the administrative costs do not exceed 25% of the total requested ECA grant funds will be more competitive (see IV.3e.2 14 for clarification on this). Applicants are strongly encouraged to cost share a portion of overhead and administrative expenses. Cost-sharing, including contributions from the applicant, proposed in-country partner(s), and other sources should be included in the budget request. Proposal budgets that do not reflect cost sharing will be deemed not competitive on this criterion.

V.2e. Support of Diversity

Proposals should demonstrate substantive support of the Bureau's policy on diversity. Achievable and relevant features should be cited in both program administration (selection of participants, program venue and program evaluation) and program content (orientation and wrap-up sessions, program meetings, resource materials and follow-up activities). Applicants should refer to the Bureau's Diversity, Freedom and Democracy Guidelines in the Proposal Submission Instructions (PSI).

V.2f. Follow-on Activities

Applicants should provide a plan to conduct activities after the Bureau-funded project has concluded in order to ensure that Bureau-supported programs are not isolated events. Funds for all post-grant activities must be in the form of contributions from the applicant or sources outside of the Bureau. Costs for these activities must not appear in the proposal budget, but should be outlined in the narrative.

V.2g. Program Evaluation

Proposals should include a detailed plan to evaluate the program. Program objectives should target clearly defined results in quantitative terms. Competitive evaluation plans will describe how applicant organizations would measure these results, and proposals should include draft data collection instruments (surveys, questionnaires, etc.) in Tab E.

VI. Award Administration Information

VI.1. Award Notices

Final awards cannot be made until funds have been appropriated by Congress, allocated and committed through internal Bureau procedures. Successful applicants will receive a Federal Assistance Award (FAA) from the Bureau's Grants Office. The FAA and the original proposal with subsequent modifications (if applicable) shall be the only binding authorizing document between the recipient and the U.S. Government. The FAA will be signed by an authorized Grants Officer, and mailed to the recipient's responsible officer identified in the application. Unsuccessful applicants will receive notification of the results of the application review from the ECA program office coordinating this competition.

VI.2. Additional Requirements for the Palestinian Authority, West Bank, and Gaza

All awards made under this competition must be executed according to all relevant U.S. laws and policies regarding assistance to the Palestinian Authority, and to the West Bank and Gaza. Organizations must consult with relevant Public Affairs Offices before entering into any formal arrangements or agreements with Palestinian organizations or institutions.

Note: To assure that planning for the inclusion of the Palestinian Authority complies with requirements, please contact Thomas Johnston, Tel. (202) 632–6056; e-mail: *JohnstonTJ@state.gov* for additional information.

VI.3. Administrative and National Policy Requirements

Administrative and National Policy Requirements: Terms and Conditions for the Administration of ECA agreements include the following:

Office of Management and Budget Circular A–122, ''Cost Principles for Nonprofit Organizations.''

Office of Management and Budget Circular A–21, ''Cost Principles for Educational Institutions.''

OMB Circular A–87, ''Cost Principles for State, Local and Indian Governments''.

OMB Circular No. A–110 (Revised), Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and other Nonprofit Organizations.

OMB Circular No. A–102, Uniform Administrative Requirements for Grants-in-Aid to State and Local Governments.

OMB Circular No. A–133, Audits of States, Local Government, and Non-profit Organizations.

Please reference the following Web sites for additional information:

http://www.whitehouse.gov/omb/grants_circulars/

http://fa.statebuy.state.gov

VI.4. Reporting Requirements

You must provide ECA with a hard copy original plus one electronic copy of the following reports:

VI.4a. Final Reports

A final program and financial report no more than 90 days after the expiration of the award;

VI.4b. One-page Report

A concise, one-page final program report summarizing program outcomes no more than 90 days after the expiration of the award. This one-page report will be transmitted to OMB, and be made available to the public via OMB's USAspending.gov Web site—as part of ECA's Federal Funding Accountability and Transparency Act (FFATA) reporting requirements.

VI.4c. SF–PPR

A SF–PPR, ''Performance Progress Report'' Cover Sheet should be submitted with all program reports.

VI.4d. Quarterly Reports

Quarterly program and financial reports should be submitted for the duration of the program. For program reports, award recipients will be required to provide reports analyzing their evaluation findings to the Bureau. (Please refer to section IV.3.d.3, ''Program Monitoring and Evaluation'') All data collected, including survey responses and contact information, must be maintained for a minimum of three years and provided to the Bureau upon request. All reports must be sent to the ECA Grants Officer and ECA Program Officer listed in the final assistance award document.

VI.5. Additional Program Data Requirements

VI.5a. Data on Program Participants and Activities

Award recipients will be required to maintain specific data on program participants and activities in an electronically accessible database format that can be shared with the Bureau as required. At a minimum, the data must include the following: Name, address, contact information and biographic sketch of all persons who travel internationally on funds provided by the agreement or who benefit from the award funding but do not travel.

VI.5b. Travel

Itineraries of international and domestic travel, providing dates of travel and cities in which any exchange experiences take place. Final schedules for in-country and U.S. activities must be received by the ECA Program Officer at least three work days prior to the official opening of the activity.

VII. Agency Contacts

For questions about this announcement, contact: Carol Herrera, Office of Citizen Exchanges, ECA/PE/C, U.S. Department of State, SA–5, 3rd Floor, 2200 C St., NW., Washington, DC 20522–0503, ph. tel: (202) 632–6054, e-mail: *herreraca1@state.gov.* All correspondence with the Bureau concerning this RFGP should reference the above title and number ECA/PE/C–10–01.

Please read the complete announcement before sending inquiries or submitting proposals. Once the RFGP deadline has passed, Bureau staff may not discuss this competition with applicants until the proposal review process has been completed.

VIII. Other Information

Notice

The terms and conditions published in this RFGP are binding and may not be modified by any Bureau representative. Explanatory information provided by the Bureau that contradicts published language will not be binding. Issuance of the RFGP does not constitute an award commitment on the part of the Government. The Bureau reserves the right to reduce, revise, or increase proposal budgets in accordance with the needs of the program and the availability of funds. Awards made will be subject to periodic reporting and evaluation requirements per section VI.4 above.

Dated: December 1, 2009

Maura M. Pally,

Acting Assistant Secretary for Educational and Cultural Affairs, U.S. Department of State.

[FR Doc. E9–29538 Filed 12–10–09; 8:45 am]

BILLING CODE 4710–05–P

DEPARTMENT OF STATE

[Public Notice 6847]

Culturally Significant Objects Imported for Exhibition Determinations: ''Rachel Whiteread: Drawings''

SUMMARY: Notice is hereby given of the following determinations: Pursuant to the authority vested in me by the Act of October 19, 1965 (79 Stat. 985; 22 U.S.C. 2459), Executive Order 12047 of March 27, 1978, the Foreign Affairs Reform and Restructuring Act of 1998 (112 Stat. 2681, *et seq.;* 22 U.S.C. 6501 note, *et seq.*), Delegation of Authority No. 234 of October 1, 1999, Delegation of Authority No. 236 of October 19, 1999, as amended, and Delegation of Authority No. 257 of April 15, 2003 [68 FR 19875], I hereby determine that the objects to be included in the exhibition ''Rachel Whiteread: Drawings,'' imported from abroad for temporary exhibition within the United States, are of cultural significance. The objects are imported pursuant to a loan agreement with the foreign owner or custodian. I also determine that the exhibition or display of the exhibit objects at the Armand Hammer Museum of Art and Cultural Center, Los Angeles, CA, from on or about January 31, 2010, until on or about May 2, 2010; the Nasher Sculpture Center, Dallas, TX, from on or about May 28, 2010, until on or about August 15, 2010, and at possible additional exhibitions or venues yet to be determined, is in the national interest. I have ordered that Public Notice of these Determinations be published in the **Federal Register**.

FOR FURTHER INFORMATION CONTACT: For further information, including a list of the exhibit objects, contact Julie Simpson, Attorney-Adviser, Office of the Legal Adviser, U.S. Department of State (telephone: 202–632–6467). The mailing address is U.S. Department of State, SA–5, L/PD, Fifth Floor (Suite 5H03), Washington, DC 20522–0505.

Dated: December 3, 2009.

Maura M. Pally,

Deputy Assistant Secretary for Professional and Cultural Exchanges, Bureau of Educational and Cultural Affairs, Department of State.

[FR Doc. E9–29574 Filed 12–10–09; 8:45 am]

BILLING CODE 4710–05–P

DEPARTMENT OF STATE

[Public Notice 6835]

Review of Unused Presidential Permit: Laredo, Texas International Railroad Bridge

SUMMARY: More than 14 years ago, the Department of State issued to the Union Pacific Railroad/Missouri Pacific Railroad Company, a Presidential permit for an international rail bridge at Laredo, Texas. To date, the permit remains unused. The Department and other Federal agencies are currently evaluating whether to revoke, modify, or retain as written this long-unused permit given the change of circumstances in the project area, development of nearby projects, inaction by the permittee, and apparent lack of interest in pursuing the corresponding projects in Mexico. The review is not a judgment regarding either the need for a new bridge or the merits of Union Pacific Railroad/Missouri Pacific Railroad Company's (UP) plan, but rather represents a recognition that the project for which this permit was issued has gone unimplemented longer than similar projects and, due to the passage of time, may no longer be viable. UP provided a project status update, which is included in the **SUPPLEMENTARY INFORMATION** section below.

DATES: Interested members of the public are invited to submit written comments regarding this permit review on or before February 9, 2010.

ADDRESSES: Submit comments to Mr. Stewart Tuttle, U.S.-Mexico Border Affairs Coordinator, via e-mail at *WHA–BorderAffairs@state.gov,* or by mail at WHA/MEX—Room 3909, Department of State, 2201 C St., NW., Washington, DC 20520.

FOR FURTHER INFORMATION CONTACT: Mr. Stewart Tuttle, U.S.-Mexico Border Affairs Coordinator, via e-mail at *WHA–BorderAffairs@state.gov;* by phone at 202–647–9894; or by mail at Office of Mexican Affairs—Room 3909, Department of State, 2201 C St., NW., Washington, DC 20520. Information about Presidential permits is available at *http://www.state.gov/p/wha/rt/permit/.*

SUPPLEMENTARY INFORMATION: Executive Order 11423 of August 16, 1968, as amended, authorizes the Secretary of State to issue Presidential permits for the construction, connection, operation, and maintenance of facilities crossing the international borders of the United States, including, but not limited to, bridges and pipelines connecting the United States with Canada or Mexico. In order to issue a Presidential permit, the Secretary or her delegate must find that a border crossing is in the U.S. national interest. Within the context of appropriate border security, safety, health, and environmental requirements, it is in the U.S. national interest to facilitate the efficient movement of legitimate goods and travelers across U.S. borders.

Since 1968, the Department has issued 21 Presidential permits for non-pipeline border crossings on the U.S.-Mexico border and one for the U.S.-Canada border. Of the 21 U.S.-Mexican border projects that have received permits, most began construction within two to five years. The Presidential permit process, which emphasizes interagency and binational coordination, is designed to ensure that border crossings are built if, and only if, there is clear local, binational, and interagency support for the project and construction is in the U.S. national interest. It is not in the U.S. national interest to commit scarce government resources (*e.g.,* Customs and Border Protection inspectors, highway improvement funds, *etc.*) as well as private resources (*e.g.,* land, capital, *etc.*) for border crossing projects that cannot be successfully implemented within a reasonable time period. While the Department may find a project to be in the U.S. national interest under a certain set of circumstances, those circumstances may change over time so that, five or ten years later, the Department may conclude that the project is no longer in the national interest or the relevant agencies may reconsider their recommendations on the Department's initial grant of the permit. The border region is dynamic and fast-changing and it is important that an outdated permit not be used to build a border crossing on a site that is no longer appropriate due to the passage of time (*e.g.,* due to changes in transportation patterns, development patterns, *etc.*). At the same time, the Department recognizes that, by their nature, border crossing projects are complex, time consuming, and subject to political, financial, regulatory, and logistical setbacks.

In this review, the Department of State seeks public input on whether to revoke, modify, or retain as written the Presidential permit that it issued in 1995 to the Union Pacific Railroad/Missouri Pacific Railroad Company (UP) for an international rail bridge at Laredo, Texas. Interested members of the public are invited to submit written comments, as set forth above.

The following is the text of a letter that UP submitted on September 3, 2009, to the Department, providing its initial input to this review process.

Begin text

I am responding on behalf of Union Pacific Railroad Company (''UP'') to Mr. Daniel D. Darrach's August 7, 2009 letter concerning the Presidential Permit UP received in May 1995 (the ''Permit''), to construct, operate, and maintain a new international railroad bridge between Laredo, Texas, and Nuevo Laredo, Tamaulipas (the ''New Bridge''). In his letter Mr. Darrach correctly noted that construction has not yet begun on the New Bridge, and he invited UP to provide a brief, written statement outlining its interest in maintaining the Permit, current and planned activities to implement the project, and coordination with government agencies on both sides of the border.

UP is very interested in maintaining the Permit. Though construction of the New Bridge (which would be a part of a total project known as the Flecha Lane project) has not commenced and no start date has been established for the capacity-related reasons described below, UP has purchased all right-of-way in the U.S. required for the Flecha Lane project and has planned (e.g., engineering) extensively for it. We are also considering how the Mexican portion of the project would be implemented. In fact, I recently met with Sr. Jorge Licon, head of the rail division of the Mexico's Secretary of Communications and Transportation (''SCT''), to discuss various rail bridge options at Laredo/Nuevo Laredo.

We believe that the validity of the justifications for the New Bridge outlined in our application for the Permit will return in the foreseeable future. Continuation of the Permit would allow for construction to begin immediately when, as we expect, the level of rail traffic crossing between the U.S. and Mexico at Laredo/Nuevo Laredo increases and renews the need for the New Bridge.

In 1994, when UP filed its application for the Permit, the existing bridge between Laredo and Nuevo Laredo (the ''Existing Bridge'') was approaching the limit of its capacity. Now, however, with the implementation of various operating and process efficiencies and the recent economic downturn, the traffic of the Existing Bridge's three users consumes only about 50% of its capacity. (There are three users of the Existing Bridge: UP, with about 65% of the traffic traversing it, Kansas City Southern de Mexico (''KCSM''), which was part of the Mexican national railway system before it was privatized in the mid to late 1990s, and the Texas Mexican Railway Company (''TexMex'')). KCSM and TexMex are both wholly-owned by Kansas City Southern Industries (''KCS''), which also owns 100% of The Kansas City Southern Railroad Company.) Shortly after UP's application for the Permit, the Mexican railroad with which UP and TexMex connect at the Existing Bridge was privatized. This privatized entity has proven much readier than its predecessor to make capital investments and process improvements that have increased the Existing Bridge's capacity.

Over time, a number of improvements have been made to the infrastructure at the

Existing Bridge and in the way traffic is processed for interchange at that border crossing. UP and KCSM have made significant capital investments to increase capacity—UP at its Port Laredo yard approximately eight miles north of Laredo and KCSM at its Sanchez Yard in Nuevo Laredo. Both KCSM and UP have added the Centralized Traffic Control (''CTC'') system and additional sidings on their main lines on their respective sides of the border. This addition of yard capacity, CTC, and sidings allows our trains to more quickly proceed to and from the border crossing, thereby reducing congestion at the crossing and increasing the Existing Bridge's capacity.

Process improvements made include the implementation of the dispacho previo system (a system providing for a more fluid and faster operation by clearing cars to cross from the U.S. into Mexico prior to their arrival at the border) and the Automated Manifest System with US Customs, the installation of VACIS machines on both sides of the border, the increased use of ''run-through'' trains (including locomotives), and improved customs processes. These improvements have expedited movements over the Existing Bridge and substantially increased its capacity.

The diminished current need for the New Bridge, or for any other bridge that would replace the Existing Bridge, has also resulted from declining traffic levels caused by the recent downturn in the general economy and by the rerouting by customers of certain trains from the Laredo/Nuevo Laredo crossing to the crossing at Eagle Pass, Texas/Piedras Negras, Coahuila. In addition, the failure of anticipated movements originating from the Port of Lazaro Cardenas, Mexico, to materialize has reduced projected traffic volumes.

The result is that current traffic over the Existing Bridge consumes approximately 50% of its capacity. For this reason, we do not believe that the New Bridge, nor any other new rail bridge at the Laredo/Nuevo Laredo crossing, is required at this time. But we are confident that traffic levels will increase and that a new bridge will be required in the future. Operating and other considerations dictate that any such new rail bridge should take the form of the Flecha Lane project, including the New Bridge. Continuation of the Permit would allow construction of the New Bridge to begin quickly when increases in traffic levels tax the capacity of the Existing Bridge.

We are aware of two other proposals for international railroad bridges at Laredo/Nuevo Laredo. Unfortunately, neither of these proposals, as presently planned, would meet UP's needs. We understand that KCS intends to apply for a Presidential Permit to construct and operate a new international bridge at Laredo/Nuevo Laredo approximately 12 miles southeast of the Existing Bridge (the ''East Loop By-Pass Project''). The East Loop By-Pass Project would involve the construction of approximately 51 miles of trackage in an eastern loop around Laredo/Nuevo Laredo. UP opposes the East Loop By-Pass Project because it would present significant operating problems and expense to UP and would add approximately 24 miles of circuity to UP movements interchanged with KCSM. At a minimum, any Presidential Permit for the East Loop Project should be made contingent upon agreement between KCS and UP for UP's use of the bridge and access trackage, including compensation terms. To date, KCS has declined UP's requests to discuss this important matter.

The other proposed project would involve the construction of a new railroad bridge approximately 19 miles west of the Existing Bridge (the ''Columbia River Project'') which would connect with trackage on the U.S. side constructed alongside the existing toll road at approximately mile post 27. The Columbia River Project is supported more by the governmental entities that have proposed it than by the railroads that would actually use it. UP opposes the Columbia River Project since it would, if implemented, present significant operational problems for UP. We doubt the project will ever be undertaken due to its high cost and the opposition of various affected parties, including KCS.

I would very much appreciate the opportunity to speak with you further about UP's position on this very important matter.

Sincerely, Robert Naro, Vice President for Mexico Operations, Union Pacific Railroad Company

End Text

Dated: December 4, 2009.

Alex Lee,

Director, Office of Mexican Affairs, Department of State.

[FR Doc. E9–29335 Filed 12–10–09; 8:45 am]

BILLING CODE 4710–29–P

DEPARTMENT OF TRANSPORTATION

Surface Transportation Board

[STB Finance Docket No. 35329]

A&R Terminal Railroad Company—Acquisition and Operation Exemption—A&R Logistics, Inc.

A&R Terminal Railroad Company (ARTR), a noncarrier, has filed a verified notice of exemption under 49 CFR 1150.31 to acquire, by lease, and to operate A&R Logistics, Inc.'s (A&R) Morris Transload Facility and approximately 6.25 miles of right-of-way and trackage located in the transload facility, in Morris, IL.[1]

ARTR states that the rail line to be acquired and operated by ARTR constitutes a line of railroad for which an exemption from the Board is required because it is ARTR's initial rail acquisition and operation, notwithstanding that it might otherwise be considered to be spur, industrial, and/or switching track exempt from the Board's acquisition and operation authority under 49 U.S.C. 10906.[2]

The earliest this transaction may be consummated is December 25, 2009, the effective date of the exemption (30 days after the verified notice of exemption was filed).

ARTR certifies that its projected revenues as a result of the transaction will not exceed those that would qualify it as a Class III rail carrier.

Pursuant to the Consolidated Appropriations Act, 2008, Public Law 110–161, § 193, 121 Stat. 1844 (2007), nothing in this decision authorizes the following activities at any solid waste rail transfer facility: Collecting, storing, or transferring solid waste outside of its original shipping container; or separating or processing solid waste (including baling, crushing, compacting, and shredding). The term ''solid waste'' is defined in section 1004 of the Solid Waste Disposal Act, 42 U.S.C. 6903.

If ARTR's verified notice contains false or misleading information, the exemption is void *ab initio.* Petitions to revoke the exemption under 49 U.S.C. 10502(d) may be filed at any time. The filing of a petition to revoke will not automatically stay the effectiveness of the exemption. Stay petitions must be filed no later than December 18, 2009 (at least 7 days before the exemption becomes effective).

An original and 10 copies of all pleadings, referring to STB Finance Docket No. 35329, must be filed with the Surface Transportation Board, 395 E Street, SW., Washington, DC 20423–0001. In addition, one copy of each pleading must be served on David C. Dillon, Dillon & Nash, Ltd., 111 West Washington Street, Suite 719, Chicago, IL 60602.

Board decisions and notices are available on our Web site at *http://www.stb.dot.gov.*

Decided: December 7, 2009.

By the Board, Rachel D. Campbell, Director, Office of Proceedings.

Kulunie L. Cannon,

Clearance Clerk.

[FR Doc. E9–29495 Filed 12–10–09; 8:45 am]

BILLING CODE 4915–01–P

[1] The Morris Transload Facility trackage is not described by milepost numbers.

[2] *See Effingham RR Co.—Pet. for Declaratory Order,* 2 S.T.B. 606 (1997), *aff'd sub nom. United Transp. Union—Ill. Legislative Bd. v. Surface Transp. Bd.,* 183 F.3d 606 (7th Cir. 1999); *see also Bulkmatic RR.—Acquire and Operate—Bulkmatic Transport,* 6 S.T.B. 481 (2002).

DEPARTMENT OF TRANSPORTATION

Surface Transportation Board

[STB Finance Docket No. 35330]

Rusk County Rural Rail District—Acquisition Exemption—Union Pacific Railroad Company

Rusk County Rural Rail District (RCRRD), a noncarrier, has filed a verified notice of exemption under 49 CFR 1150.31 to acquire from Union Pacific Railroad Company (UP) a 15.69-mile line of railroad beginning at milepost 0.59 near Overton, TX, and ending at milepost 16.28 near Henderson, TX.[1]

RCRRD anticipates that the transaction will be consummated on or after December 28, 2009.

RCRRD certifies that its projected annual revenues as a result of this transaction will not exceed $5 million and will not result in the creation of a Class II or Class I rail carrier.

This transaction is related to a concurrently filed verified notice of exemption in STB Finance Docket No. 35327, *Blacklands Railroad, Inc.—Lease and Operation Exemption—Rusk County Rural Rail District.* In that proceeding, Blacklands Railroad, Inc. (BLR) seeks to lease from RCRRD and operate the 15.69 miles of rail line that RCRRD seeks to acquire in this proceeding. According to RCRRD, on the date that RCRRD acquires the line, BLR will assume responsibility for operating the line pursuant to a lease agreement between RCRRD and BLR.

RCRRD states that it has reached an agreement with UP on the principal terms of the transaction but they have not yet finalized it. RCRRD anticipates finalizing the agreement before the effective date of the notice. RCRRD also states that the proposed acquisition of the line will not involve any provision or agreement between UP and RCRRD that would limit future interchange with a third-party connecting carrier, as the line only connects with UP at Overton, TX.

Pursuant to the Consolidated Appropriations Act, 2008, Public Law 110–161, § 193, 121 Stat. 1844 (2007), nothing in this decision authorizes the following activities at any solid waste rail transfer facility: collecting, storing, or transferring solid waste outside of its original shipping container; or separating or processing solid waste (including baling, crushing, compacting, and shredding). The term ''solid waste'' is defined in section 1004 of the Solid Waste Disposal Act, 42 U.S.C. 6903.

If the verified notice contains false or misleading information, the exemption is void *ab initio.* Petitions to revoke the exemption under 49 U.S.C. 10502(d) may be filed at any time. The filing of a petition to revoke will not automatically stay the effectiveness of the exemption. Stay petitions must be filed no later than December 18, 2009 (at least 7 days before the exemption becomes effective).

An original and 10 copies of all pleadings, referring to STB Finance Docket No. 35330, must be filed with the Surface Transportation Board, 395 E Street, SW., Washington, DC 20423–0001. In addition, one copy of each pleading must be served on Robert A. Wimbish, Baker & Miller PLLC, 2401 Pennsylvania Ave., NW., Suite 300, Washington, DC 20037.

Board decisions and notices are available on our website at *http://www.stb.dot.gov.*

Decided: December 7, 2009.

By the Board, Rachel D. Campbell, Director, Office of Proceedings.

Kulunie L. Cannon,

Clearance Clerk.

[FR Doc. E9–29513 Filed 12–10–09; 8:45 am]

BILLING CODE 4915–01–P

DEPARTMENT OF TRANSPORTATION

Surface Transportation Board

[STB Finance Docket No. 35296]

Anthony Macrie—Continuance in Control Exemption—New Jersey Seashore Lines, Inc.

Anthony Macrie (Macrie), a noncarrier, has filed a verified notice of exemption to continue in control of New Jersey Seashore Lines, Inc. (NJSL), upon NJSL's becoming a Class III rail carrier.

This transaction is related to a concurrently filed verified notice of exemption for NJSL to operate approximately 13 miles of rail line owned by Clayton Sand Company, between milepost 66.0 at Lakehurst, Borough of Lakehurst, in Ocean County, NJ, and milepost 79.0 at Woodmansie, Woodland Township, in Burlington County, NJ.[1] *See* STB Finance Docket No. 35297, *New Jersey Seashore Lines, Inc.—Operation Exemption—Clayton Sand Company.*[2]

The parties may consummate the transaction on or after December 24, 2009.

Macrie owns 100 percent of the common stock of NJSL and also owns 100 percent of the common stock of Cape May Seashore Lines, Inc. (CMSL), an existing Class III rail carrier that obtained authority in *Cape May Seashore Lines, Inc.—Modified Rail Certificate,* STB Finance Docket No. 34112 (STB served Nov. 19, 2001).

The parties represent that: (1) The rail line to be operated by NJSL does not connect with any other railroads in the corporate family; (2) the transaction is not part of a series of anticipated transactions that would connect the rail lines with any other railroad in the corporate family; [3] and (3) the transaction does not involve a Class I rail carrier. Therefore, the transaction is exempt from the prior approval requirements of 49 U.S.C. 11323. *See* 49 CFR 1180.2(d)(2).

Under 49 U.S.C. 10502(g), the Board may not use its exemption authority to relieve a rail carrier of its statutory obligation to protect the interests of its employees. Section 11326(c), however, does not provide for labor protection for transactions under sections 11324 and 11325 that involve only Class III rail carriers. Accordingly, the Board may not impose labor protective conditions here because all of the carriers involved are Class III carriers.

If the verified notice contains false or misleading information, the exemption is void *ab initio.* Petitions to revoke the exemption under 49 U.S.C. 10502(d) may be filed at any time. The filing of a petition to revoke will not automatically stay the effectiveness of the exemption. Stay petitions must be filed no later than December 18, 2009 (at least 7 days before the exemption becomes effective).

An original and 10 copies of all pleadings, referring to STB Finance Docket No. 35296, must be filed with the Surface Transportation Board, 395 E Street, SW., Washington, DC 20423–0001. In addition, one copy of each pleading must be served on John D.

[1] UP has obtained Board authority to abandon this line of railroad in *Union Pacific Railroad Company—Abandonment—in Rusk County, TX,* STB Docket No. AB–33 (Sub-No. 275) (STB served Sept. 11, 2009), but has not consummated the abandonment. In lieu of abandonment, UP has agreed to sell the right-of-way, track, and track structures to RCRRD for continued rail service.

[1] Macrie states that the involved line is a segment of rail line originally known as the Central Railroad Company of New Jersey's Southern Division.

[2] By decision served on September 25, 2009, the Board held publication of this notice in abeyance because it is directly related to the notice in STB Finance Docket No. 35297 which was also held in abeyance. In a decision served today in STB Finance Docket No. 35297, the Board is publishing the notice that had been held in abeyance. Thus, this notice is also no longer being held in abeyance.

[3] Macrie states that, although CMSL and NJSL will both operate in the State of New Jersey, the lines of the two carriers are at least 50 miles apart at the closest point.

Heffner, 1750 K Street, NW., Suite 200, Washington, DC 20006.

Board decisions and notices are available on our Web site at *http://www.stb.dot.gov.*

Decided: December 7, 2009.

By the Board, Rachel D. Campbell, Director, Office of Proceedings.

Kulunie L. Cannon,

Clearance Clerk.

[FR Doc. E9–29499 Filed 12–10–09; 8:45 am]

BILLING CODE 4915–01–P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement: Wayne and Oakland Counties, MI

AGENCY: Federal Highway Administration (FHWA), U.S. DOT.

ACTION: Notice of availability (NOA) of the Final Environmental Impact Statement (FEIS) for the Detroit Intermodal Freight Terminal (DIFT) and Section 4(f) Evaluation.

SUMMARY: This notice announces the availability of the Final Environmental Impact Statement (FEIS) and Section 4(f) Evaluation for the DIFT. This action is pursuant to the National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. 4321 *et seq,* as amended and the Council on Environmental Quality Regulations (40 CFR Parts 1500–1508). The FEIS identifies the Preferred Alternative to enhance the intermodal freight terminal at the Livernois-Junction Yard in Detroit, Michigan; describes the environmental impacts of the proposed project and proposed mitigation; and addresses comments received on the Draft Environmental Impact Statement and Section 4(f) Evaluation issued in April 15, 2005.

DATES: Any comments must be received on or before January 29, 2010. The FEIS waiting period ends 49 days after the U.S. Environmental Protection Agency publishes the DIFT's NOA in the **Federal Register** (currently scheduled to be published on December 11th).

ADDRESSES:

1. *Document Availability:* Copies of the FEIS are available for public inspection and review at the following locations:

- Ferndale Public Library, 222 E. Nine Mile, Ferndale, MI.
- Henry Ford Centennial Library, 16301 Michigan Ave., Dearborn, MI.
- Detroit Public Library, 5201 Woodward Ave., Detroit, MI.
- Bowen Branch of the Detroit Public Library, 3648 W. Vernor, Detroit, MI.
- MDOT Detroit Transportation Service Center, 1400 Howard St., Detroit, MI.
- MDOT Oakland Transportation Service Center, 2300 Dixie Hwy., Waterford, MI.
- MDOT Region Office, 18101 W. Nine Mile Rd., Southfield, MI.
- MDOT Bureau of Transportation Planning, 425 Ottawa St., Lansing, MI.

The document also may be viewed and commented on at *http://www.michigan.gov/mdot/0,1607,7–151–9621_11058_26215—,00.html.*

Copies of the FEIS may be requested from Bob Parsons (Public Involvement and Hearings Officer) at the Michigan Department of Transportation, 425 W. Ottawa Street, P.O. Box 30050, Lansing, MI 48909 or by calling (517) 373–9534.

2. *Comments:* Send any comments on the FEIS to the Michigan Department of Transportation, c/o Bob Parsons (Public Involvement and Hearings Officer), 425 W. Ottawa Street, P.O. Box 30050, Lansing, MI 48909; *Fax:* (517) 373–9255; or *e-mail: parsonsb@michigan.gov*. Information regarding this proposed action is available in alternative formats upon request.

FOR FURTHER INFORMATION CONTACT: Donald Cameron, Planning & Program Development Manager, at FHWA Michigan Division, 315 W. Allegan Street, Room 201; Lansing, MI 48933; by phone at (517) 702–1826, or e-mail at *Donald.Cameron@dot.gov*. David Williams, Environmental Program Manager, FHWA Michigan Division, 315 W. Allegan Street, Room 201; Lansing, MI 48933; by phone at (517) 702–1820; or e-mail at *David.Williams@dot.gov*.

SUPPLEMENTARY INFORMATION: The DEIS for the DIFT was approved in April 2005. Since more than three years has passed since the signing of the DEIS, a re-evaluation of the DIES was done in accordance with 23 CFR 771.129. This FEIS reflect the comments received during the public hearing process and updated data in all critical areas.

The goal of the project is to provide and/or improve regional intermodal facilities, owned and/or operated by the one or more of the DIFT Rail Related participants—Grand Trunk Western Railroad, Inc. (CN); Canadian Pacific Railway Company (CP); CSX Transportation, Inc. (CSX); Norfolk Southern Railway company (NS); and the Michigan Department of Transportation (MDOT)—with sufficient capacity and interconnectivity to provide for existing and future intermodal demand and to reduce time, monetary costs, and congestion to the support the economic competitiveness of Southeastern Michigan. This will be done by providing necessary intermodal terminal capacity and improving the related rail and highway infrastructure within Wayne and Oakland counties.

The Detroit Intermodal Freight terminal Project Pre-Development Plan Agreement was established to further refine the understandings and intentions of the DIFT Rail Related Participants.

Purpose and Need for the Project: The purpose of the DIFT is to enhance intermodal operations and economic competitiveness of Southeast Michigan by improving freight transportation opportunities and efficiencies for business, industry, and the military. The need to enhance intermodal operations results from Detroit's need for greater intermodal capacity and improved connectivity.

Preferred Alternative: The Preferred Alternative involves consolidating intermodal operations of the CSX, NS, and CP railroads at the Livernois-Junction Yard in Southwest Detroit and improving external connectors to benefit all Class I railroads, including CN.

Authority: 42 U.S.C. 4321 *et seq,* as amended and the Council on Environmental Quality Regulations (40 CFR Parts 1500–1508) 23 CFR 771.117; and 23 U.S.C. 139(1)(1).

Issued on: December 1, 2009.

James J. Steele,

Division Administrator, Lansing, Michigan.

[FR Doc. E9–29189 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–22–P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Tier 1 Final Environmental Impact Statement (FEIS) for the Placer Parkway Corridor Preservation Project

December 2009.

AGENCY: United States Department of Transportation, Federal Highway Administration.

ACTION: Notice of Availability (NOA) of the Tier 1 Final Environmental Impact Statement (FEIS) for the Placer Parkway Corridor Preservation Project and a Section 4(f) Evaluation.

SUMMARY: The Federal Highway Administration (FHWA) is issuing this notice to advise the public of the availability of a Tier 1 FEIS and Section 4(f) Evaluation for the Placer Parkway Corridor Preservation Project, a proposed transportation corridor in western Placer and eastern Sutter Counties, California. This action is pursuant to the National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. 4321 *et seq.,* as amended and the

Council of Environmental Quality Regulations (40 CFR parts 1500–1508). The Tier 1 FEIS discusses the recommended alternative for the Placer Parkway Project between State Route (SR) 70/99, in southeastern Sutter County, and SR 65, in southwestern Placer County, California; describes the potential environmental and socioeconomic effects of the project and a framework for mitigation; and addresses comments received on the Tier 1 Draft Environmental Impact Statement (DEIS) circulated in June 2007 and the Partially Revised Tier 1 DEIS circulated in January 2009.

DATES: Any comments regarding the Tier 1 FEIS must be received on or before January 11, 2010.

ADDRESSES: Copies are available for public inspection and review on the project Web site at *http://www.pctpa.net/placerparkway/index.htm* and at the following locations:

Placer County Transportation Planning Agency 299 Nevada Street, Auburn, CA
Placer County Planning Department 3091 County Center Drive, Auburn, CA
Placer County Public Works Department 3091 County Center Drive, Auburn, CA
Placer County Library 350 Nevada Street, Auburn, CA
Placer County Library, Loomis 6050 Library Drive, Loomis, CA
Sutter County Library, Main Branch 7504 Forbes Avenue, Yuba City, CA
Sutter County Library, Pleasant Grove Branch 3093 Howsley Road, Pleasant Grove, CA
Sutter County Library, Browns Branch 1248 Pacific Avenue, Rio Oso, CA
Sacramento County Public Library 828 I Street, Sacramento, CA
California State University 6000 J Street, Sacramento, CA
Sutter County Planning Department 1130 Civic Center Blvd., Yuba City, CA
Sacramento County Planning Department, 827 7th Street, Room 230, Sacramento, CA
Roseville Public Library—Downtown 225 Taylor Street, Roseville CA
Roseville Public Library—Maidu 1530 Maidu Drive, Roseville CA
Rocklin Library 5400 Fifth Street, Rocklin, CA
Lincoln Library 590 Fifth Street, Lincoln, CA
Sierra College Library 5000 Rocklin Road, Rocklin, CA
Sacramento County Library, North Natomas, 2500 New Market Drive, Sacramento, CA
Sacramento County Library, North Highlands—Antelope 4235 Antelope Road, Antelope, CA

FOR FURTHER INFORMATION CONTACT: Gary Sweeten,, North Team Leader, Local Agency Programs, FWHA California Division, 650 Capitol Mall, Suite 4–100, Sacramento, CA 95814 or via e-mail at *gary.sweeten@dot.gov* or Ms. Celia McAdam, Executive Director, 299 Nevada St., Auburn, California 95603, or via e-mail to *pctpa@pctpa.net.*

SUPPLEMENTARY INFORMATION: This proposed federal action is to preserve a corridor for the future construction of Placer Parkway, a new east-west roadway linking State Route (SR) 70/99 in Sutter County east to SR 65 in Placer County. Specifically, the action being considered and evaluated is to select and preserve a 500 to 1,000 foot-wide corridor in the project study area, within which the future four- or six-lane Placer Parkway may be constructed. Five or six interchanges were proposed, depending on the corridor alignment alternative. The Placer Parkway project is intended to reduce anticipated congestion on both the local and regional transportation system and to advance economic development goals in south Sutter County and southwestern Placer County.

Five corridor action alternatives and a no-action alternative were evaluated during the preparation of the Tier 1 EIS. Although the Parkway would be designed and construction-level impacts analyzed during the preparation of the Tier 2 EIS, for the purpose of the Tier 1 EIS, several assumptions have been made about potential design and configuration concepts. These assumptions would be subject to further development and refinement, and specific decisions about the design of the roadway would be made during the Tier 2 EIS process.

The Final Tier 1 EIS includes responses to the comments received on the Tier 1 Draft and Partially Revised Draft EIS/EIR and identifies Alternative 5 as the preferred corridor. The Parkway to be constructed in this corridor would be a high-speed, limited access roadway. Conceptually, interchanges would be located at SR 70/99 (at one-half mile north of Riego Road or at Sankey Road), one or two locations to be determined in southern Sutter County, Fiddyment Road, Foothills Boulevard, and SR 65 at Whitney Ranch Parkway. Access would be restricted for the 7-mile segment between Pleasant Grove Road and Fiddyment Road.

Issued On: December 2, 2009.

Karen Bobo,

Director, Local Agency Programs, Federal Highway Administration, Sacramento, CA.

[FR Doc. E9–29187 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–22–P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Notice of Final Federal Agency Actions on Proposed Highways in the State of Utah—Geneva Road EIS and SR–262, Montezuma Creek to Aneth

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of limitation on claims for judicial review of actions by FHWA.

SUMMARY: This notice announces actions taken by the FHWA that are final within the meaning of 23 U.S.C. 139(l)(1). The actions relate to various proposed highway projects in the State of Utah. Those actions grant approvals for the projects.

DATES: By this notice, the FHWA is advising the public of final agency actions subject to 23 U.S.C. 139(l)(1). A claim seeking judicial review of the Federal agency actions on any of the listed highway projects will be barred unless the claim is filed on or before June 9, 2010. If the Federal law that authorizes judicial review of a claim provides a time period of less than 180 days for filing such claim, then that shorter time period still applies.

FOR FURTHER INFORMATION CONTACT: For FHWA: Mr. Edward Woolford, Environmental Program Manager, Federal Highway Administration, 2520 West 4700 South, Suite 9A, Salt Lake City, Utah 84118; telephone: (801) 963–0182; e-mail: *Edward.Woolford@DOT.gov*. The FHWA Utah Division Office's normal business hours are 7:00 a.m. to 4:30 p.m. (Mountain Standard Time). For UDOT: Ms. Rebecca Stromness, Environmental Program Manager, Utah Department of Transportation, 4501 South 2700 West, Box 148450, Salt Lake City, Utah 84118–8450; telephone: (801) 965–4327; e-mail: *Rstromness@utah.gov*.

SUPPLEMENTARY INFORMATION: Notice is hereby given that the FHWA has taken final agency action by issuing approval for the highway projects in the State of Utah that are listed below. The action by the Federal agency on a project, and the laws under which such actions were taken, are described in the documented environmental impact statement (EIS) issued in connection with the projects, and in other project records. The FEIS,

Record of Decision (ROD), and other project records for the listed projects are available by contacting the FHWA or the Utah Department of Transportation at the addresses provided above. For some of the projects, the FEIS, ROD and documents also can be viewed and downloaded electronically as specified below. This notice applies to all Federal agency decisions as of the issuance date of this notice and all laws under which such actions were taken, including but not limited to:

1. General: National Environmental Policy Act (NEPA) [42 U.S.C. 4321–4347]; Federal-Aid Highway Act (FAHA) [23 U.S.C. 109 and 23 U.S.C. 128].

2. Air: Clean Air Act (CAA) [42 U.S.C. 7401–7671(q)].

3. Land: Section 4(f) of the Department of Transportation Act of 1966 (4f) [49 U.S.C. 303].

4. Wildlife: Endangered Species Act (ESA) [16 U.S.C. 1531–1544 and Section 1536]; Migratory Bird Treaty Act (MBTA) [16 U.S.C. 703–712].

5. Historic and Cultural Resources: Section 106 of the National Historic Preservation Act of 1966, as amended (106) [16 U.S.C. 470(f) et seq.]; Archeological Resources Protection Act of 1977 (ARPA) [16 U.S.C. 470(aa)–470(ll)]; Archeological and Historic Preservation Act (AHPA) [16 U.S.C. 469–469(c)].

6. Social and Economic: Civil Rights Act of 1964 (Civil Rights) [42 U.S.C. 2000(d) et seq.

7. Wetlands and Water Resources: Clean Water Act (Section 401, Section 319) [33 U.S.C. 1251–1377]; Rivers and Harbors Act of 1899 (RHA) [33 U.S.C. 401–406]; Wetlands Mitigation (Sections 103 and 133) [23 U.S.C. 103(b)(6)(M) and 133(b)(11)].

8. Executive Orders: E.O. 11990 Protection of Wetlands; E.O. 11988 Floodplain Management; E.O. 11514 Protection and Enhancement of Environmental Quality; E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations.

The projects subject to this notice are:

Geneva Road. Project location: Utah County, Utah; Provo Center Street north through Utah County, including the cities of Orem, Vineyard, and Lindon to State Street (SR–89) in Pleasant Grove. Project reference number: FHWA–UT–EIS–08–01–F. Project type: The project will include roadway improvements to add travel lanes in order to meet LOS D in year 2030, intersection improvements, cross-section improvements, improvements to the horizontal alignment at 400 North, and sidewalk, trail, and shoulder improvements. Final agency action(s) taken under: NEPA, FAHA, CAA, 4f, 106, ESA, MBTA, ARPA, AHPA, Civil Rights, E.O. 11990, E.O. 11514, E.O. 12898. FHWA NEPA documents: FEIS approved on August 18, 2009; ROD issued on October 13, 2009, both available at *http://www.udot.utah.gov/geneva.*

SR–262, Montezuma Creek to Aneth. Project location: San Juan County, Utah; SR–262, Montezuma Creek to Aneth. Project reference number: FHWA–UT–EIS–08–02–D. Project type: The project proposes safety improvements to 8.5 miles of State Route (SR) 162 (formally numbered SR–262) by improving roadway deficiencies and reducing potential conflicts with pedestrians and animals through improvements and realignment of the SR–162/SR–262 intersection and highway widening between the cities of Montezuma and Aneth, Utah. Final agency action(s) taken under: NEPA, FAHA, CAA, 4f, 106, ESA, MBTA, ARPA, AHPA, Civil Rights, E.O. 11990, E.O. 11514, E.O. 12898. FHWA NEPA documents: FEIS approved on June 2, 2009; ROD issued on August 25, 2009, available at *http://www.udot.utah.gov/sr-262/.*

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Authority: 23 U.S.C. § 139(l)(1).

Issued on: December 3, 2009.

James C. Christian,

Division Administrator, Salt Lake City.

[FR Doc. E9–29579 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–RY–P

DEPARTMENT OF TRANSPORTATION

Surface Transportation Board

[STB Finance Docket No. 35327]

Blacklands Railroad, Inc.—Lease and Operation Exemption—Rusk County Rural Rail District

Blacklands Railroad, Inc. (BLR), a Class III rail carrier, has filed a verified notice of exemption under 49 CFR 1150.41 to lease from Rusk County Rural Rail District (RCRRD), and to operate, a 15.69-mile line of railroad extending between milepost 0.59 near Overton, TX, and milepost 16.28 near Henderson, TX.[1]

The transaction is expected to be consummated on or shortly after December 28, 2009, when RCRRD acquires the line from UP.

BLR certifies that its projected annual revenues as a result of this transaction will not result in BLR becoming a Class II or Class I rail carrier. BLR further certifies that its projected annual revenues as a result of this transaction will not exceed $5 million. BLR states that its lease agreement with RCRRD will not contain a provision prohibiting BLR from interchanging traffic with a third party.

This transaction is related to a concurrently filed verified notice of exemption in STB Finance Docket No. 35330, *Rusk County Rural Rail District—Acquisition Exemption—Union Pacific Railroad Company.* In that proceeding, RCRRD seeks to acquire from UP the 15.69 miles of rail line that BLR seeks to lease and operate in this proceeding.

Pursuant to the Consolidated Appropriations Act, 2008, Public Law 110–161, § 193, 121 Stat. 1844 (2007), nothing in this decision authorizes the following activities at any solid waste rail transfer facility: Collecting, storing, or transferring solid waste outside of its original shipping container; or separating or processing solid waste (including baling, crushing, compacting, and shredding). The term ''solid waste'' is defined in section 1004 of the Solid Waste Disposal Act, 42 U.S.C. 6903.

If the verified notice contains false or misleading information, the exemption is void *ab initio.* Petitions to revoke the exemption under 49 U.S.C. 10502(d) may be filed at any time. The filing of a petition to revoke will not automatically stay the effectiveness of the exemption. Stay petitions must be filed no later than December 18, 2009 (at least 7 days before the exemption becomes effective).

An original and 10 copies of all pleadings, referring to STB Finance Docket No. 35327, must be filed with the Surface Transportation Board, 395 E Street, SW., Washington, DC 20423–0001. In addition, one copy of each pleading must be served on Karl Morell, Of Counsel, Ball Janik LLP, Suite 225, 1455 F Street, NW., Washington, DC 20005.

Board decisions and notices are available on our Web site at *http://www.stb.dot.gov.*

[1] Union Pacific Railroad Company (UP) has obtained Board authority to abandon this line of railroad in *Union Pacific Railroad Company—Abandonment—in Rusk County, TX,* STB Docket No. AB–33 (Sub-No. 275) (STB served Sept. 11, 2009), but has not consummated the abandonment. In lieu of abandonment, UP has agreed to sell the right-of-way, track, and track structures to RCRRD for continued rail service. In turn, BLR will lease the line from RCRRD and operate it.

Decided: December 7, 2009.

By the Board, Rachel D. Campbell, Director, Office of Proceedings.

Kulunie L. Cannon,

Clearance Clerk.

[FR Doc. E9–29496 Filed 12–10–09; 8:45 am]

BILLING CODE 4915–01–P

DEPARTMENT OF TRANSPORTATION

Surface Transportation Board

[STB Finance Docket No. 35297]

New Jersey Seashore Lines, Inc.—Operation Exemption—Clayton Sand Company

New Jersey Seashore Lines, Inc. (NJSL), a noncarrier, has filed a verified notice of exemption under 49 CFR 1150.31 to operate approximately 13 miles of rail line [1] owned by Clayton Sand Company (Clayton), between milepost 66.0 at Lakehurst, Borough of Lakehurst, in Ocean County, NJ, and milepost 79.0 at Woodmansie, Woodland Township, in Burlington County, NJ.[2]

This transaction is related to a concurrently filed verified notice of exemption for Anthony Macrie (Macrie), a noncarrier, to continue in control of NJSL and Class III rail carrier Cape May Seashore Lines, Inc., upon NJSL's becoming a Class III rail carrier. *See* STB Finance Docket No. 35296, *Anthony Macrie—Continuance in Control Exemption—New Jersey Seashore Lines, Inc.*[3]

The transaction may be consummated on or after December 25, 2009.

NJSL certifies that its projected annual revenues as a result of the transaction will not result in NJSL becoming a Class II or Class I rail carrier and further certifies that its projected annual revenue will not exceed $5 million.

[1] According to NJSL, the line was formerly operated as private industry track by Ashland Railway, Inc., under contract. Prior to that time, the line was owned by Consolidated Rail Corporation (Conrail), which abandoned it before Clayton's acquisition in 1985.

[2] NJSL states that the line connects to the national rail system at Lakehurst, NJ.

[3] By decision served on September 25, 2009, the Board held publication of the notice in the **Federal Register** and effectiveness of the exemption in abeyance pending further filings by NJSL or Clayton. On October 14, 2009, NJSL and Macrie filed a joint pleading in response to the Board's order. On October 22, 2009, James Riffin filed a notice of intent to participate as a party of record and specified a number of findings he wanted the Board to make in connection with the notice. The Board will specifically address the issues raised in the above filings in a future Board decision, but the explanation provided by NJSL is sufficient to permit the publication of the notice.

Pursuant to the Consolidated Appropriations Act, 2008, Public Law 110–161, § 193, 121 Stat. 1844 (2007), nothing in this decision authorizes the following activities at any solid waste rail transfer facility: Collecting, storing or transferring solid waste outside of its original shipping container; or separating or processing solid waste (including baling, crushing, compacting and shredding). The term ''solid waste'' is defined in section 1004 of the Solid Waste Disposal Act, 42 U.S.C. 6903.

If the verified notice contains false or misleading information, the exemption is void *ab initio.* Petitions to revoke the exemption under 49 U.S.C. 10502(d) may be filed at any time. The filing of a petition to revoke will not automatically stay the effectiveness of the exemption. Petitions for stay must be filed no later than December 18, 2009 (at least 7 days before the exemption becomes effective).

An original and 10 copies of all pleadings, referring to STB Finance Docket No. 35297, must be filed with the Surface Transportation Board, 395 E Street, SW., Washington, DC 20423–0001. In addition, a copy of each pleading must be served on John D. Heffner, 1750 K Street, NW., Suite 200, Washington, DC 20006.

Board decisions and notices are available on our Web site at *http://www.stb.dot.gov.*

Decided: December 7, 2009.

By the Board, Rachel D. Campbell, Director, Office of Proceedings.

Kulunie L. Cannon,

Clearance Clerk.

[FR Doc. E9–29497 Filed 12–10–09; 8:45 am]

BILLING CODE 4915–01–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket ID. FMCSA–2009–0290]

Qualification of Drivers; Exemption Applications; Diabetes

AGENCY: Federal Motor Carrier Safety Administration (FMCSA).

ACTION: Notice of applications for exemptions from the diabetes standard; request for comments.

SUMMARY: FMCSA announces receipt of applications from 46 individuals for exemptions from the prohibition against persons with insulin-treated diabetes mellitus (ITDM) operating commercial motor vehicles (CMVs) in interstate commerce. If granted, the exemptions would enable these individuals with ITDM to operate commercial motor vehicles in interstate commerce.

DATES: Comments must be received on or before January 11, 2010.

ADDRESSES: You may submit comments bearing the Federal Docket Management System (FDMS) Docket ID FMCSA–2009–0290 using any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the on-line instructions for submitting comments.
- *Mail:* Docket Management Facility; U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001.
- *Hand Delivery:* West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays.
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FOR FURTHER INFORMATION CONTACT: Dr. Mary D. Gunnels, Director, Medical Programs, (202) 366–4001, *fmcsamedical@dot.gov*, FMCSA, Department of Transportation, 1200 New Jersey Avenue, SE., Room W64–

224, Washington, DC 20590–0001. Office hours are from 8:30 a.m. to 5 p.m., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Background

Under 49 U.S.C. 31136(e) and 31315, FMCSA may grant an exemption for a 2-year period if it finds ''such exemption would likely achieve a level of safety that is equivalent to, or greater than, the level that would be achieved absent such exemption.'' The statute also allows the Agency to renew exemptions at the end of the 2-year period. The 46 individuals listed in this notice have recently requested an exemption from the diabetes prohibition in 49 CFR 391.41(b)(3), which applies to CMV drivers in interstate commerce. Accordingly, the Agency will evaluate the qualifications of each applicant to determine whether granting the exemption will achieve the required level of safety mandated by the statutes.

Qualifications of Applicants

Bob A. Bauer

Mr. Bauer, age 52, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Bauer meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A Commercial Driver's License (CDL) from Wisconsin.

Michael P. Berger

Mr. Berger, 35, has had ITDM since 1976. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Berger meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class D operator's license from Montana.

William D. Blosch

Mr. Blosch, 50, has had ITDM since 2006. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Blosch meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class B CDL from Georgia.

Michael Bohlen

Mr. Bohlen, 58, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Bohlen meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from South Dakota.

Bradley N. Brown

Mr. Brown, 45, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Brown meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Iowa.

Victor M. Brunner

Mr. Brunner, 48, has had ITDM since 2006. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Brunner meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Wisconsin.

Tom L. Cooley

Mr. Cooley, 56, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Cooley meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Kansas.

Wallace E. Crouse, Jr.

Mr. Crouse, 55, has had ITDM since 2008. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Crouse meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class D operator's license from Massachusetts.

Jesse A. DeCoux

Mr. DeCoux, 39, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has

stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. DeCoux meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class B CDL from Minnesota.

Robert G. Dohman, Jr.

Mr. Dohman, 54, has had ITDM since 2004. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Dohman meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from North Dakota.

Andrew J. Dreyer

Mr. Dreyer, 23, has had ITDM since 2006. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Dreyer meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class C CDL from Pennsylvania.

Danny E. Edmondson

Mr. Edmondson, 49, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Edmondson meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Georgia.

Steven W. Edwards

Mr. Edwards, 48, has had ITDM since 2008. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Edwards meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Indiana.

Mark W. Espeaignette

Mr. Espeaignette, 36, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Espeaignette meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Maine.

Andrew C. Everett

Mr. Everett, 21, has had ITDM since 1999. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Everett meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class D operator's license from Arizona.

Paul J. Failla

Mr. Failla, 54, has had ITDM since 2008. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Failla meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Missouri.

Wendell G. Fordham

Mr. Fordham, 64, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Fordham meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Georgia.

Eugene G. Friedman

Mr. Friedman, 51, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Friedman meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class D operator's license from New Jersey.

Edward L. Gilbert

Mr. Gilbert, 48, has had ITDM since 2006. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using

insulin, and is able to drive a CMV safely. Mr. Gilbert meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from West Virginia.

Donald W. Hansen

Mr. Hansen, 53, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Hansen meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from North Dakota.

Joseph S. Hernandez

Mr. Hernandez, 23, has had ITDM since 1993. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Hernandez meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class D operator's license from New Mexico.

Corrine J. Hoffman

Ms. Hoffman, 53, has had ITDM since 2008. Her endocrinologist examined her in 2009 and certified that she has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of her diabetes using insulin, and is able to drive a CMV safely. Ms. Hoffman meets the requirements of the vision standard at 49 CFR 391.41(b)(10). Her optometrist examined her in 2009 and certified that she does not have diabetic retinopathy. She holds a Class A CDL from Wisconsin.

Robert E. Holden

Mr. Holden, 40, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Holden meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Kansas.

Shondell S. Ivy

Mr. Ivy, 38, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Ivy meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Mississippi.

Kevin Joaquin

Mr. Joaquin, 28, has had ITDM since 2008. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Joaquin meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Massachusetts.

Jordan T. Johnston

Mr. Johnston, 24, has had ITDM since 2005. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Johnston meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds an operator's license from Indiana.

Jere W. Kirkpatrick

Mr. Kirkpatrick, 57, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Kirkpatrick meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Ohio.

Joshua J. Kramer

Mr. Kramer, 32, has had ITDM since 1988. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Kramer meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class D operator's license from Wisconsin.

Kyle A. Leach

Mr. Leach, 32, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using

insulin, and is able to drive a CMV safely. Mr. Leach meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class O operator's license from Nebraska, which allows him to drive any non-commercial vehicle except motorcycles.

Robert J. Lewis, Jr.

Mr. Lewis, 36, has had ITDM since 1987. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Lewis meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class D operator's license from Vermont.

Mitchell D. Luft

Mr. Luft, 28, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Luft meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class D operator's license from Ohio.

Martin E. Marandola

Mr. Marandola, 21, has had ITDM since 1998. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Wheeler meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class C operator's license from California.

Richard W. McNeil

Mr. McNeil, 46, has had ITDM since 2008. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. McNeil meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from New Mexico.

Stacy R. Oberholzer

Mr. Oberholzer, 23, has had ITDM since 2005. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Oberholzer meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class C operator's license from Pennsylvania.

Michael S. Ogle

Mr. Ogle, 50, has had ITDM since 2004. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Ogle meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he has stable nonproliferative diabetic retinopathy. He holds a Class A CDL from Georgia.

Walter L. Patrick

Mr. Patrick, 54, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Patrick meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he has stable nonproliferative diabetic retinopathy. He holds a Class A CDL from Tennessee.

Clifford A. Peters

Mr. Peters, 63, has had ITDM since 2002. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Peters meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class D operator's license from Illinois.

Richard L. Piercefield

Mr. Piercefield, 52, has had ITDM since 2008. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Piercefield meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Michigan.

Steven F. Riley

Mr. Riley, 45, has had ITDM since 2007. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the

assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Riley meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class D operator's license from Connecticut.

Kevin A. Roginski

Mr. Roginski, 38, has had ITDM since 2005. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Roginski meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class C operator's license from Pennsylvania.

Herman Smalls, Jr.

Mr. Smalls, 50, has had ITDM since 2002. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Smalls meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he has stable nonproliferative diabetic retinopathy. He holds a Class A CDL from Georgia.

Bruce M. Stockton

Mr. Stockton, 47, has had ITDM since 2008. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Stockton meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His optometrist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Missouri.

Rick M. Tiu

Mr. Tiu, 53, has had ITDM since 2008. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Tiu meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class A CDL from Hawaii.

Todd R. Vickers

Mr. Vickers, 41, has had ITDM since 1981. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Vickers meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class C operator's license from Maryland.

Shaun M. Wheeler

Mr. Wheeler, 38, has had ITDM since 1999. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Wheeler meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he does not have diabetic retinopathy. He holds a Class B CDL from Connecticut.

Charles A. Witt

Mr. Witt, 44, has had ITDM since 2009. His endocrinologist examined him in 2009 and certified that he has had no hypoglycemic reactions resulting in loss of consciousness, requiring the assistance of another person, or resulting in impaired cognitive function that occurred without warning in the past 5 years; understands diabetes management and monitoring; and has stable control of his diabetes using insulin, and is able to drive a CMV safely. Mr. Witt meets the requirements of the vision standard at 49 CFR 391.41(b)(10). His ophthalmologist examined him in 2009 and certified that he has stable nonproliferative diabetic retinopathy. He holds a Class A CDL from Minnesota.

Request for Comments

In accordance with 49 U.S.C. 31136(e) and 31315, FMCSA requests public comment from all interested persons on the exemption petitions described in this notice. We will consider all comments received before the close of business on the closing date indicated in the date section of the Notice.

FMCSA notes that Section 4129 of the Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU) requires the Secretary to revise its diabetes exemption program established on September 3, 2003 (68 FR 52441).[1] The revision must provide for individual assessment of drivers with diabetes mellitus, and be consistent with the criteria described in section 4018 of the Transportation Equity Act for the 21st Century (49 U.S.C. 31305).

Section 4129 requires: (1) The elimination of the requirement for three years of experience operating CMVs while being treated with insulin; and (2) the establishment of a specified minimum period of insulin use to demonstrate stable control of diabetes before being allowed to operate a CMV.

In response to section 4129, FMCSA made immediate revisions to the diabetes exemption program established by the September 3, 2003 Notice. FMCSA discontinued use of the 3-year driving experience and fulfilled the requirements of section 4129 while continuing to ensure that operation of CMVs by drivers with ITDM will achieve the requisite level of safety required of all exemptions granted under 49 U.S.C. 31136 (e).

[1] Section 4129(a) refers to the 2003 Notice as a ''final rule.'' However, the 2003 Notice did not issue a ''final rule'' but did establish the procedures and standards for issuing exemptions for drivers with ITDM.

Section 4129(d) also directed FMCSA to ensure that drivers of CMVs with ITDM are not held to a higher standard than other drivers, with the exception of limited operating, monitoring and medical requirements that are deemed medically necessary. FMCSA concluded that all of the operating, monitoring and medical requirements set out in the September 3, 2003 Notice, except as modified, were in compliance with section 4129(d). Therefore, all of the requirements set out in the September 3, 2003 Notice, except as modified by the Notice in the **Federal Register** on November 8, 2005 (70 FR 67777), remain in effect.

Issued on: December 2, 2009.

Larry W. Minor,

Associate Administrator for Policy and Program Development.

[FR Doc. E9–29490 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket ID. FMCSA–2009–0291]

Qualification of Drivers; Exemption Applications; Vision

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice of applications for exemptions; request for comments.

SUMMARY: FMCSA announces receipt of applications from 24 individuals for exemptions from the vision requirement in the Federal Motor Carrier Safety Regulations. If granted, the exemptions would enable these individuals to qualify as drivers of commercial motor vehicles (CMVs) in interstate commerce without meeting the Federal vision standard.

DATES: Comments must be received on or before January 11, 2010.

ADDRESSES: You may submit comments bearing the Federal Docket Management System (FDMS) Docket ID FMCSA–2009–0291 using any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov*. Follow the on-line instructions for submitting comments.
- *Mail:* Docket Management Facility; U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001.
- *Hand Delivery:* West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays.
- *Fax:* 1–202–493–2251.

Each submission must include the Agency name and the docket ID for this Notice. Note that DOT posts all comments received without change to *http://www.regulations.gov*, including any personal information included in a comment. Please see the Privacy Act heading below.

Docket: For access to the docket to read background documents or comments, go to *http://www.regulations.gov* at any time or Room W12–140 on the ground level of the West Building, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The FDMS is available 24 hours each day, 365 days each year. If you want acknowledgment that we received your comments, please include a self-addressed, stamped envelope or postcard or print the acknowledgement page that appears after submitting comments on-line.

Privacy Act: Anyone may search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or of the person signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19476). This information is also available at *http://www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Dr. Mary D. Gunnels, Director, Medical Programs, (202) 366–4001, *fmcsamedical@dot.gov*, FMCSA, Department of Transportation, 1200 New Jersey Avenue, SE., Room W64–224, Washington, DC 20590–0001. Office hours are from 8:30 a.m. to 5 p.m., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Background

Under 49 U.S.C. 31136(e) and 31315, FMCSA may grant an exemption for a 2-year period if it finds ''such exemption would likely achieve a level of safety that is equivalent to, or greater than, the level that would be achieved absent such exemption.'' FMCSA can renew exemptions at the end of each 2-year period. The 24 individuals listed in this notice have each requested an exemption from the vision requirement in 49 CFR 391.41(b)(10), which applies to drivers of CMVs in interstate commerce. Accordingly, the Agency will evaluate the qualifications of each applicant to determine whether granting an exemption will achieve the required level of safety mandated by statute.

Qualifications of Applicants

Dennis J. Ameling

Mr. Ameling, age 48, has complete loss of vision in his right eye due to a traumatic injury sustained as a child that caused a corneal scar. The best corrected visual acuity in his left eye is 20/20. Following an examination in 2009, his optometrist noted, ''I feel his vision will be stable in the future and that his vision is sufficient to drive a commercial vehicle as long as it is equipped with outside mirrors.'' Mr. Ameling reported that he has driven straight trucks for 12 years, accumulating 1.2 million miles, and tractor-trailer combinations for 15 years, accumulating 1.7 million miles. He holds a Class A Commercial Driver's License (CDL) from Iowa. His driving record for the last 3 years shows no crashes and two convictions for moving violations in a CMV, speeding in a CMV. He exceeded the speed limit by 10 miles per hour (mph) in both incidents.

Cris D. Bush

Mr. Bush, 44, has had amblyopia in his right eye since birth. The best corrected visual acuity in his right eye is 20/100 and in his left eye, 20/20. Following an examination in 2009, his optometrist noted, ''It is my opinion that Mr. Cris Bush has sufficient vision to perform the driving tasks required to operate a commercial vehicle.'' Mr. Bush reported that he has driven straight trucks for 10 years, accumulating 300,000 miles, and tractor-trailer combinations for 10 years, accumulating 320,000 miles. He holds a Class A CDL from Tennessee. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Cary Carn

Mr. Carn, 54, has a prosthetic right eye due to a traumatic injury sustained 15 years ago. The best corrected visual acuity in his left eye is 20/20. Following an examination in 2009, his optometrist noted, ''It is my opinion that Cary Carn has sufficient vision to perform the driving tasks required to operate a commercial vehicle.'' Mr. Carn reported that he has driven straight trucks for 10 years, accumulating 350,000 miles. He holds a Class D operator's license from New Jersey. His driving record for the last 3 years shows no crashes and one conviction for a moving violation in a

CMV, unsafe operation of a motor vehicle.

Billy C. Chenault

Mr. Chenault, 58, has a retinal detachment in his right eye that occurred in 1968. The best corrected visual acuity in his right eye is 20/200 and in his left eye, 20/20. Following an examination in 2009, his optometrist noted, ''It is my opinion that Mr. Chenault has sufficient vision to perform the driving tasks required to operate a commercial vehicle.'' Mr. Chenault reported that he has driven straight trucks for 18 years, accumulating 810,000 miles. He holds a Class B CDL from New Mexico. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Matthew J. Cruver

Mr. Cruver, 40, has a prosthetic left eye due to a traumatic injury sustained in 1999. The best corrected visual acuity in his right eye is 20/20. Following an examination in 2009, his optometrist noted, ''I do feel this patient has sufficient vision to operate a commercial vehicle.'' Mr. Cruver reported that he has driven tractor-trailer combinations for 10 years, accumulating 360,000 miles. He holds a Class A CDL from Pennsylvania. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Harvey Curtis, Sr.

Mr. Curtis, 52, has glaucoma in his left eye since 2004. The best corrected visual acuity in his right eye is 20/25 and in his left eye, 20/70. Following an examination in 2009, his ophthalmologist noted, ''In my opinion, Mr. Curtis has sufficient vision to perform the driving tasks required to operate a commercial vehicle.'' Mr. Curtis reported that he has driven straight trucks for 25 years, accumulating 500,000 miles. He holds a Class C operator's license from Maryland. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

David E. Evans

Mr. Evans, 55, has had amblyopia in his right eye since childhood. The best corrected visual acuity in his right eye is 20/200 and in his left eye, 20/20. Following an examination in 2009, his optometrist noted, ''My opinion is that Mr. David Evans has sufficient vision to perform the driving task required to operate a commercial vehicle.'' Mr. Evans reported that he has driven tractor-trailer combinations for 6 years, accumulating 600,000 miles. He holds a Class A CDL from North Carolina. His driving record for the last 3 years shows no crashes and one conviction for a moving violation in a CMV, failure to obey a traffic sign.

Wayne W. Ferguson

Mr. Ferguson, 67, has had amblyopia in his right eye since childhood. The best corrected visual acuity in his right eye is 20/50 and in his left eye, 20/25. Following an examination in 2009, his optometrist noted, ''It is my opinion that Mr. Ferguson has sufficient vision to perform driving tasks required to operate a commercial vehicle.'' Mr. Ferguson reported that he has driven straight trucks for 6 months, accumulating 3,000 miles, and tractor-trailer combinations for 27 years, accumulating 2 million miles. He holds a Class A CDL from Virginia. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Randy M. Garcia

Mr. Garcia, 34, has a prosthetic right eye due to a traumatic injury sustained 20 years ago. The best corrected visual acuity in his left eye is 20/25. Following an examination in 2009, his optometrist noted, ''It is my opinion that Mr. Garcia has sufficient vision to perform the driving tasks required to operate a commercial vehicle.'' Mr. Garcia reported that he has driven straight trucks for 3½ years, accumulating 175,000 miles, and tractor-trailer combinations for 3½ years, accumulating 175,000 miles. He holds a Class A CDL from New Mexico. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Miguel Godinez

Mr. Godinez, 44, has aphakia in his right eye due to a traumatic injury sustained as a child. The best corrected visual acuity in his right eye is 20/60 and in his left eye, 20/20. Following an examination in 2009, his ophthalmologist noted, ''He is able to recognize the colors of traffic control signals and he is in my medical opinion qualified to meet the visual requirements of driving a commercial vehicle.'' Mr. Godinez reported that he has driven straight trucks for 6 years, accumulating 510,000 miles, and tractor-trailer combinations for 13 years, accumulating 780,000 miles. He holds a Class A CDL from California. His driving record for the last 3 years shows one crash, for which he was not cited, and no convictions for moving violations in a CMV.

Henry J. Gregoire, Jr.

Mr. Gregoire, 47, has had aphakia in his left eye due to a traumatic injury he sustained in 1981. The uncorrected visual acuity in his right eye is 20/20 and in his left eye, 5 feet/400. Following an examination in 2009, his optometrist noted, ''It is my opinion that Henry has sufficient vision to perform the driving tasks required to operate commercial motor vehicles.'' Mr. Gregoire reported that he has driven straight trucks for 10 years, accumulating 200,000 miles, and tractor-trailer combinations for 6 months, accumulating 34,000 miles. He holds a Class A CDL from Minnesota. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Jason L. Hoovan

Mr. Hoovan, 30, has had amblyopia in his right eye since birth. The best corrected visual acuity in his right eye is 20/200 and in his left eye, 20/20. Following an examination in 2009, his optometrist noted, ''I believe that Mr. Hoovan has sufficient vision to perform the driving tasks required to operate a commercial vehicle.'' Mr. Hoovan reported that he has driven straight trucks for 3 years, accumulating 300,000 miles, and tractor-trailer combinations for 3 years, accumulating 225,000 miles. He holds a Class A CDL from Utah. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Tom A. McCarty

Mr. McCarty, 57, has complete loss of vision in his left eye since childhood. The visual acuity in his right eye is 20/15. Following an examination in 2009, his optometrist noted that Mr. McCarty's ''vision is sufficient for operation of a commercial vehicle.'' Mr. McCarty reported that he has driven straight trucks for 7 years, accumulating 336,000 miles, and tractor-trailer combinations for 20 years, accumulating 1.4 million miles. He holds a Class A CDL from New Mexico. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Carlos A. Mendez-Castellon

Mr. Mendez, 40, has had macular scarring in his right eye since childhood. The visual acuity in his right eye is hand motion vision and in his left eye, 20/20. Following an examination in 2009, his ophthalmologist noted, ''In my opinion he is able to operate all of the driving tasks associated with a

commercial vehicle.'' Mr. Mendez reported that he has driven straight trucks for 7 years, accumulating 210,000 miles. He holds an operator's license from Virginia. His driving record for the last 3 years shows no crashes and one conviction for a moving violation in a CMV, failure to obey traffic sign.

Glenn A. Miller

Mr. Miller, 45, has had optic atrophy in his left eye since 2004. The visual acuity in his right eye is 20/15 and in his left eye, 20/60. Following an examination in 2009, his ophthalmologist noted, ''From the testing done, Mr. Miller has sufficient vision to drive a commercial vehicle.'' Mr. Miller reported that he has driven straight trucks for 10 years, accumulating 120,000 miles, and tractor-trailer combinations for 13 years, accumulating 455,000 miles. He holds a class A CDL from Virginia. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Raymond R. Miller

Mr. Miller, 49, has complete loss of vision in his left eye due to a traumatic injury sustained 15 years ago. The best corrected visual acuity in his right eye is 20/15. Following an examination in 2009, his optometrist noted, ''It is my opinion that his vision is stable and sufficient to perform driving tasks required to operate a commercial vehicle.'' Mr. Miller reported that he has driven straight trucks for 10 years, accumulating 50,000 miles. He holds a Class A CDL from Missouri. His driving record for the last 3 years shows one crash, for which he was cited, and no moving violations in a CMV.

Russell L. Moyers

Mr. Moyers, 54, has had amblyopia in his left eye since childhood. The best corrected visual acuity in his right eye is 20/20 and in his left eye, 20/400. Following an examination in 2009, his optometrist noted, ''I believe that Russell has the visual ability to operate a commercial vehicle.'' Mr. Moyers reported that he has driven tractor-trailer combinations for 21 years, accumulating 2.1 million miles. He holds a Class A CDL from West Virginia. His driving record for the last 3 years shows no crashes and one conviction for a moving violation in a CMV, failure to obey a traffic sign.

William E. Norris

Mr. Norris, 48, has a prosthetic left eye due to a traumatic injury sustained in 1984. The best corrected visual acuity in his right eye is 20/15. Following an examination in 2009, his optometrist noted, ''In my medical opinion, Mr. Norris' vision is more than sufficient to perform the tasks required to operate a commercial vehicle.'' Mr. Norris reported that he has driven straight trucks for 15 years, accumulating 390,000 miles. He holds a Class A CDL from North Carolina. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Donald Overton

Mr. Overton, 78, has complete loss of vision in his left eye due to a retinal detachment that occurred in 1962. The best corrected visual acuity in his right eye is 20/25. Following an examination in 2009, his optometrist noted, ''I see no reason why he should be denied driving privileges as a commercial driver.'' Mr. Overton reported that he has driven straight trucks for 25 years, accumulating 325,000 miles, and tractor-trailer combinations for 15 years, accumulating 300,000 miles. He holds a Class A CDL from Illinois. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Willie L. Parks

Mr. Parks, 63, has a detached retina in his right eye sustained in 2005. The best corrected visual acuity in his right eye is count-finger-vision and in his left eye, 20/25. Following an examination in 2009, his ophthalmologist noted, ''The patient has sufficient vision to perform driving tasks for a commercial vehicle.'' Mr. Parks reported that he has driven tractor-trailer combinations for 12 years, accumulating 915,600 miles. He holds a Class A CDL from California. His driving record for the last 3 years shows no crashes and one conviction for a moving violation in a CMV. He was driving in the wrong lane.

Derrick A. Robinson

Mr. Robinson, 31, has complete loss of vision in his left eye due to a traumatic injury sustained in 2005. The best corrected visual acuity in his right eye is 20/20. Following an examination in 2009, his optometrist noted, ''In our opinion, this patient has sufficient vision to perform the driving tasks required including the operation of a commercial vehicle.'' Mr. Robinson reported that he has driven straight trucks for 7 years, accumulating 700,000 miles, and tractor-trailer combinations for 7 years, accumulating 960,960 miles. He holds a Class A CDL from California. His driving record for the last 3 years shows two crashes, one of which he was not cited for, and two convictions for moving violations in a CMV, driving in the wrong lane and speeding in a CMV. He exceeded the speed limit by 10 mph.

Clarence Robishaw, Jr.

Mr. Robishaw, 59, has a corneal scar in his left eye which occurred in 2003. The best corrected visual acuity in his right eye is 20/20 and in the left eye, count-finger-vision. Following an examination in 2009, his ophthalmologist noted, ''In my opinion, Clarence Robishaw Jr. has sufficient vision to perform the driving task that is required to operate a commercial motor vehicle.'' Mr. Robishaw reported that he has driven tractor-trailer combinations for 14 years, accumulating 980,000 miles. He holds a Class A CDL from New York. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Norman J. Watson

Mr. Watson, 49, has corneal scarring in his left eye due to an injury sustained in 1982. The visual acuity in his right eye is 20/20 and in his left eye, count-finger-vision. Following an examination in 2009, his ophthalmologist noted, ''It is my medical opinion that this gentleman should have no problems driving a commercial vehicle.'' Mr. Watson reported that he has driven straight trucks for 28 years, accumulating 980,000 miles, and tractor-trailer combinations for 28 years, accumulating 1.3 million miles. He holds a Class A CDL from North Carolina. His driving record for the last 3 years shows three crashes, two of which he was not cited for, and no convictions for moving violations in a CMV.

Jeffrey T. Zuniga

Mr. Zuniga, 50, has a macular scar in his right due to a traumatic injury sustained as a child. The best corrected visual acuity in his right eye is 20/400 and in his left eye, 20/20. Following an examination in 2009, his optometrist noted, ''In my opinion, the patient has sufficient corrected vision to perform the driving tasks required to operate a commercial vehicle.'' Mr. Zuniga reported that he has driven straight trucks for 12½ years, accumulating 1.2 million miles. He holds a Class A CDL from Connecticut. His driving record for the last 3 years shows no crashes and no convictions for moving violations in a CMV.

Request for Comments

In accordance with 49 U.S.C. 31136(e) and 31315, FMCSA requests public comment from all interested persons on

the exemption petitions described in this notice. The Agency will consider all comments received before the close of business January 11, 2010. Comments will be available for examination in the docket at the location listed under the **ADDRESSES** section of this notice. The Agency will file comments received after the comment closing date in the public docket, and will consider them to the extent practicable. In addition to late comments, FMCSA will also continue to file, in the public docket, relevant information that becomes available after the comment closing date. Interested persons should monitor the public docket for new material.

Issued on: December 2, 2009.

Larry W. Minor,

Associate Administrator for Policy and Program Development.

[FR Doc. E9–29481 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–1999–6156; FMCSA–2003–15268; FMCSA–2005–22194; FMCSA–2007–29019; FMCSA–2007–0017]

Qualification of Drivers; Exemption Applications; Vision

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice of renewal of exemptions; Request for Comments.

SUMMARY: FMCSA announces its decision to renew the exemptions from the vision requirement in the Federal Motor Carrier Safety Regulations for 27 individuals. FMCSA has statutory authority to exempt individuals from the vision requirement if the exemptions granted will not compromise safety. The Agency has concluded that granting these exemption renewals will provide a level of safety that is equivalent to, or greater than, the level of safety maintained without the exemptions for these commercial motor vehicle (CMV) drivers.

DATES: This decision is effective January 8, 2010. Comments must be received on or before January 11, 2010.

ADDRESSES: You may submit comments bearing the Federal Docket Management System (FDMS) Docket ID FMCSA–1999–6156; FMCSA–2003–15268; FMCSA–2005–22194; FMCSA–2007–29019; FMCSA–2007–0017, using any of the following methods.

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the on-line instructions for submitting comments.
- *Mail:* Docket Management Facility; U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001.
- *Hand Delivery or Courier:* West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays.
- *Fax:* 1–202–493–2251.

Each submission must include the Agency name and the docket number for this Notice. Note that DOT posts all comments received without change to *http://www.regulations.gov,* including any personal information included in a comment. Please see the Privacy Act heading below.

Docket: For access to the docket to read background documents or comments, go to *http://www.regulations.gov* at any time or Room W12–140 on the ground level of the West Building, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The FDMS is available 24 hours each day, 365 days each year. If you want acknowledgment that we received your comments, please include a self-addressed, stamped envelope or postcard or print the acknowledgement page that appears after submitting comments on-line.

Privacy Act: Anyone may search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or of the person signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19476). This information is also available at *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Dr. Mary D. Gunnels, Director, Medical Programs, (202) 366–4001, *fmcsamedical@dot.gov,* FMCSA, Department of Transportation, 1200 New Jersey Avenue, SE., Room W64–224, Washington, DC 20590–0001. Office hours are from 8:30 a.m. to 5 p.m. Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Background

Under 49 U.S.C. 31136(e) and 31315, FMCSA may renew an exemption from the vision requirements in 49 CFR 391.41(b)(10), which applies to drivers of CMVs in interstate commerce, for a two-year period if it finds ''such exemption would likely achieve a level of safety that is equivalent to, or greater than, the level that would be achieved absent such exemption.'' The procedures for requesting an exemption (including renewals) are set out in 49 CFR part 381.

Exemption Decision

This notice addresses 27 individuals who have requested a renewal of their exemptions in accordance with FMCSA procedures. FMCSA has evaluated these 27 applications for renewal on their merits and decided to extend each exemption for a renewable two-year period. They are:

Thomas E. Anderson, Garry A. Baker, Bruce W. Barrett, Richard D. Becotte, Wayne Burnett, Theodore W. Cozat, Alex G. Dlugolenski, Karen Y. Duvall, Nigel L. Farmer, Gordon R. Fritz, John A. Graham, Jimmy D. Gregory, Donald W. Holt, Larry Lentz, Boleslaw Makowski, Joseph W. Meacham, Charles M. Moore, Gary T. Murray, Anthony D. Ovitt, John R. Parsons, III, Martin Postma, Steven S. Reinsvold, Michael J. Richard, Glenn T. Riley, George E. Todd, Gary S. Warren, Bradley A. Weiser.

These exemptions are extended subject to the following conditions: (1) That each individual has a physical examination every year (a) by an ophthalmologist or optometrist who attests that the vision in the better eye continues to meet the standard in 49 CFR 391.41(b)(10), and (b) by a medical examiner who attests that the individual is otherwise physically qualified under 49 CFR 391.41; (2) that each individual provides a copy of the ophthalmologist's or optometrist's report to the medical examiner at the time of the annual medical examination; and (3) that each individual provides a copy of the annual medical certification to the employer for retention in the driver's qualification file and retain a copy of the certification on his/her person while driving for presentation to a duly authorized Federal, State, or local enforcement official. Each exemption will be valid for two years unless rescinded earlier by FMCSA. The exemption will be rescinded if: (1) The person fails to comply with the terms and conditions of the exemption; (2) the exemption has resulted in a lower level of safety than was maintained before it was granted; or (3) continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315.

Basis for Renewing Exemptions

Under 49 U.S.C. 31315(b)(1), an exemption may be granted for no longer than two years from its approval date and may be renewed upon application for additional two year periods. In accordance with 49 U.S.C. 31136(e) and 31315, each of the 27 applicants has satisfied the entry conditions for obtaining an exemption from the vision requirements (64 FR 54948; 65 FR 159; 66 FR 66969; 68 FR 69432; 71 FR 644; 72 FR 71995; 68 FR 37197; 68 FR 48987; 70 FR 57353; 70 FR 72689; 72 FR 71993; 72 FR 58362; 72 FR 67344; 72 FR 67340; 73 FR 1395) Each of these 27 applicants has requested renewal of the exemption and has submitted evidence showing that the vision in the better eye continues to meet the standard specified at 49 CFR 391.41(b)(10) and that the vision impairment is stable. In addition, a review of each record of safety while driving with the respective vision deficiencies over the past two years indicates each applicant continues to meet the vision exemption standards. These factors provide an adequate basis for predicting each driver's ability to continue to drive safely in interstate commerce. Therefore, FMCSA concludes that extending the exemption for each renewal applicant for a period of two years is likely to achieve a level of safety equal to that existing without the exemption.

Request for Comments

FMCSA will review comments received at any time concerning a particular driver's safety record and determine if the continuation of the exemption is consistent with the requirements at 49 U.S.C. 31136(e) and 31315. However, FMCSA requests that interested parties with specific data concerning the safety records of these drivers submit comments by January 11, 2010.

FMCSA believes that the requirements for a renewal of an exemption under 49 U.S.C. 31136(e) and 31315 can be satisfied by initially granting the renewal and then requesting and evaluating, if needed, subsequent comments submitted by interested parties. As indicated above, the Agency previously published notices of final disposition announcing its decision to exempt these 27 individuals from the vision requirement in 49 CFR 391.41(b)(10). The final decision to grant an exemption to each of these individuals was based on the merits of each case and only after careful consideration of the comments received to its notices of applications. The notices of applications stated in detail the qualifications, experience, and medical condition of each applicant for an exemption from the vision requirements. That information is available by consulting the above cited **Federal Register** publications.

Interested parties or organizations possessing information that would otherwise show that any, or all of these drivers, are not currently achieving the statutory level of safety should immediately notify FMCSA.

The Agency will evaluate any adverse evidence submitted and, if safety is being compromised or if continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315, FMCSA will take immediate steps to revoke the exemption of a driver.

Issued on: December 2, 2009.

Larry W. Minor,

Associate Administrator for Policy and Program Development.

[FR Doc. E9–29534 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–2000–7363; FMCSA–2001–10578; FMCSA–2003–16241]

Qualification of Drivers; Exemption Applications; Vision

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice of renewal of exemptions; request for comments.

SUMMARY: FMCSA announces its decision to renew the exemptions from the vision requirement in the Federal Motor Carrier Safety Regulations for 10 individuals. FMCSA has statutory authority to exempt individuals from the vision requirement if the exemptions granted will not compromise safety. The Agency has concluded that granting these exemption renewals will provide a level of safety that is equivalent to, or greater than, the level of safety maintained without the exemptions for these commercial motor vehicle (CMV) drivers.

DATES: This decision is effective December 31, 2009. Comments must be received on or before January 11, 2010.

ADDRESSES: You may submit comments bearing the Federal Docket Management System (FDMS) Docket ID FMCSA–2000–7363; FMCSA–2001–10578; FMCSA–2003–16241, using any of the following methods.

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the on-line instructions for submitting comments.
- *Mail:* Docket Management Facility; U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001.
- *Hand Delivery or Courier:* West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays.
- *Fax:* 1–202–493–2251.

Each submission must include the Agency name and the docket number for this Notice. Note that DOT posts all comments received without change to *http://www.regulations.gov,* including any personal information included in a comment. Please see the Privacy Act heading below.

Docket: For access to the docket to read background documents or comments, go to *http://www.regulations.gov* at any time or Room W12–140 on the ground level of the West Building, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The FDMS is available 24 hours each day, 365 days each year. If you want acknowledgment that we received your comments, please include a self-addressed, stamped envelope or postcard or print the acknowledgment page that appears after submitting comments on-line.

Privacy Act: Anyone may search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or of the person signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19476). This information is also available at *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Dr. Mary D. Gunnels, Director, Medical Programs, (202) 366–4001, *fmcsamedical@dot.gov,* FMCSA, Department of Transportation, 1200 New Jersey Avenue, SE., Room W64–224, Washington, DC 20590–0001. Office hours are from 8:30 a.m. to 5 p.m. Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Background

Under 49 U.S.C. 31136(e) and 31315, FMCSA may renew an exemption from

the vision requirements in 49 CFR 391.41(b)(10), which applies to drivers of CMVs in interstate commerce, for a two-year period if it finds ''such exemption would likely achieve a level of safety that is equivalent to, or greater than, the level that would be achieved absent such exemption.'' The procedures for requesting an exemption (including renewals) are set out in 49 CFR part 381.

Exemption Decision

This notice addresses 10 individuals who have requested renewal of their exemptions in accordance with FMCSA procedures. FMCSA has evaluated these 10 applications for renewal on their merits and decided to extend each exemption for a renewable two-year period. They are:

Ronald G. Austin
Rickey C. Dalton
Martiniano L. Espinosa
James G. LaBair
Dennis A. Leschke
Lonnie Lomax, Jr.
Eugene C. Murphy
Carl W. Skinner, Jr.
John H. Voigts
Daniel G. Wilson

These exemptions are extended subject to the following conditions: (1) That each individual has a physical examination every year (a) by an ophthalmologist or optometrist who attests that the vision in the better eye continues to meet the standard in 49 CFR 391.41(b)(10), and (b) by a medical examiner who attests that the individual is otherwise physically qualified under 49 CFR 391.41; (2) that each individual provides a copy of the ophthalmologist's or optometrist's report to the medical examiner at the time of the annual medical examination; and (3) that each individual provides a copy of the annual medical certification to the employer for retention in the driver's qualification file and retain a copy of the certification on his/her person while driving for presentation to a duly authorized Federal, State, or local enforcement official. Each exemption will be valid for two years unless rescinded earlier by FMCSA. The exemption will be rescinded if: (1) The person fails to comply with the terms and conditions of the exemption; (2) the exemption has resulted in a lower level of safety than was maintained before it was granted; or (3) continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315.

Basis for Renewing Exemptions

Under 49 U.S.C. 31315(b)(1), an exemption may be granted for no longer than two years from its approval date and may be renewed upon application for additional two year periods. In accordance with 49 U.S.C. 31136(e) and 31315, each of the 10 applicants has satisfied the entry conditions for obtaining an exemption from the vision requirements (65 FR 45817; 65 FR 77066; 67 FR 71610; 70 FR 25878; 72 FR 71993; 66 FR 53826; 66 FR 66966; 68 FR 69434; 70 FR 74102; 71 FR 646; 72 FR 71998; 68 FR 61857; 68 FR 75715) Each of these 10 applicants has requested renewal of the exemption and has submitted evidence showing that the vision in the better eye continues to meet the standard specified at 49 CFR 391.41(b)(10) and that the vision impairment is stable. In addition, a review of each record of safety while driving with the respective vision deficiencies over the past two years indicates each applicant continues to meet the vision exemption standards. These factors provide an adequate basis for predicting each driver's ability to continue to drive safely in interstate commerce. Therefore, FMCSA concludes that extending the exemption for each renewal applicant for a period of two years is likely to achieve a level of safety equal to that existing without the exemption.

Request for Comments

FMCSA will review comments received at any time concerning a particular driver's safety record and determine if the continuation of the exemption is consistent with the requirements at 49 U.S.C. 31136(e) and 31315. However, FMCSA requests that interested parties with specific data concerning the safety records of these drivers submit comments by January 11, 2010.

FMCSA believes that the requirements for a renewal of an exemption under 49 U.S.C. 31136(e) and 31315 can be satisfied by initially granting the renewal and then requesting and evaluating, if needed, subsequent comments submitted by interested parties. As indicated above, the Agency previously published notices of final disposition announcing its decision to exempt these 10 individuals from the vision requirement in 49 CFR 391.41(b)(10). The final decision to grant an exemption to each of these individuals was based on the merits of each case and only after careful consideration of the comments received to its notices of applications. The notices of applications stated in detail the qualifications, experience, and medical condition of each applicant for an exemption from the vision requirements. That information is available by consulting the above cited **Federal Register** publications.

Interested parties or organizations possessing information that would otherwise show that any, or all of these drivers, are not currently achieving the statutory level of safety should immediately notify FMCSA. The Agency will evaluate any adverse evidence submitted and, if safety is being compromised or if continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315, FMCSA will take immediate steps to revoke the exemption of a driver.

Issued on: December 4, 2009.

Larry W. Minor,

Associate Administrator for Policy and Program Development.

[FR Doc. E9–29535 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–1999–5748; FMCSA–1999–6156; FMCSA–2005–22194]

Qualification of Drivers; Exemption Applications; Vision

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice of renewal of exemptions; Request for Comments.

SUMMARY: FMCSA announces its decision to renew the exemptions from the vision requirement in the Federal Motor Carrier Safety Regulations for 10 individuals. FMCSA has statutory authority to exempt individuals from the vision requirement if the exemptions granted will not compromise safety. The Agency has concluded that granting these exemption renewals will provide a level of safety that is equivalent to, or greater than, the level of safety maintained without the exemptions for these commercial motor vehicle (CMV) drivers.

DATES: This decision is effective January 3, 2010. Comments must be received on or before January 11, 2010.

ADDRESSES: You may submit comments bearing the Federal Docket Management System (FDMS) Docket ID FMCSA–1999–5748; FMCSA–1999–6156; FMCSA–2005–22194, using any of the following methods.

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the on-line instructions for submitting comments.

• *Mail:* Docket Management Facility; U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001.

• *Hand Delivery or Courier:* West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays.

• *Fax:* 1–202–493–2251.

Each submission must include the Agency name and the docket number for this Notice. Note that DOT posts all comments received without change to *http://www.regulations.gov,* including any personal information included in a comment. Please see the Privacy Act heading below.

Docket: For access to the docket to read background documents or comments, go to *http://www.regulations.gov* at any time or Room W12–140 on the ground level of the West Building, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The FDMS is available 24 hours each day, 365 days each year. If you want acknowledgment that we received your comments, please include a self-addressed, stamped envelope or postcard or print the acknowledgement page that appears after submitting comments on-line.

Privacy Act: Anyone may search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or of the person signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19476). This information is also available at *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Dr. Mary D. Gunnels, Director, Medical Programs, (202) 366–4001, fmcsamedical@dot.gov, FMCSA, Department of Transportation, 1200 New Jersey Avenue, SE., Room W64–224, Washington, DC 20590–0001. Office hours are from 8:30 a.m. to 5 p.m. Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Background

Under 49 U.S.C. 31136(e) and 31315, FMCSA may renew an exemption from the vision requirements in 49 CFR 391.41(b)(10), which applies to drivers of CMVs in interstate commerce, for a two-year period if it finds ''such exemption would likely achieve a level of safety that is equivalent to, or greater than, the level that would be achieved absent such exemption.'' The procedures for requesting an exemption (including renewals) are set out in 49 CFR part 381.

Exemption Decision

This notice addresses 10 individuals who have requested renewal of their exemptions in accordance with FMCSA procedures. FMCSA has evaluated these 10 applications for renewal on their merits and decided to extend each exemption for a renewable two-year period. They are:
Woodrow E. Bohley
Kenneth E. Bross
Russell W. Foster
Kevin Jacoby
Richard L. Loeffelholz
Herman C. Mash
Frank T. Miller
Robert G. Rascicot
Jon H. Wurtele
Walter M. Yohn, Jr.

These exemptions are extended subject to the following conditions: (1) That each individual has a physical examination every year (a) by an ophthalmologist or optometrist who attests that the vision in the better eye continues to meet the standard in 49 CFR 391.41(b)(10), and (b) by a medical examiner who attests that the individual is otherwise physically qualified under 49 CFR 391.41; (2) that each individual provides a copy of the ophthalmologist's or optometrist's report to the medical examiner at the time of the annual medical examination; and (3) that each individual provides a copy of the annual medical certification to the employer for retention in the driver's qualification file and retain a copy of the certification on his/her person while driving for presentation to a duly authorized Federal, State, or local enforcement official. Each exemption will be valid for two years unless rescinded earlier by FMCSA. The exemption will be rescinded if: (1) The person fails to comply with the terms and conditions of the exemption; (2) the exemption has resulted in a lower level of safety than was maintained before it was granted; or (3) continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315.

Basis for Renewing Exemptions

Under 49 U.S.C. 31315(b)(1), an exemption may be granted for no longer than two years from its approval date and may be renewed upon application for additional two year periods. In accordance with 49 U.S.C. 31136(e) and 31315, each of the 10 applicants has satisfied the entry conditions for obtaining an exemption from the vision requirements (64 FR 40404; 64 FR 66962; 66 FR 66969; 68 FR 69432; 71 FR 644; 64 FR 54948; 65 FR 159; 70 FR 57353; 70 FR 72689; 72 FR 71995) Each of these 10 applicants has requested renewal of the exemption and has submitted evidence showing that the vision in the better eye continues to meet the standard specified at 49 CFR 391.41(b)(10) and that the vision impairment is stable. In addition, a review of each record of safety while driving with the respective vision deficiencies over the past two years indicates each applicant continues to meet the vision exemption standards. These factors provide an adequate basis for predicting each driver's ability to continue to drive safely in interstate commerce. Therefore, FMCSA concludes that extending the exemption for each renewal applicant for a period of two years is likely to achieve a level of safety equal to that existing without the exemption.

Request for Comments

FMCSA will review comments received at any time concerning a particular driver's safety record and determine if the continuation of the exemption is consistent with the requirements at 49 U.S.C. 31136(e) and 31315. However, FMCSA requests that interested parties with specific data concerning the safety records of these drivers submit comments by January 11, 2010.

FMCSA believes that the requirements for a renewal of an exemption under 49 U.S.C. 31136(e) and 31315 can be satisfied by initially granting the renewal and then requesting and evaluating, if needed, subsequent comments submitted by interested parties. As indicated above, the Agency previously published notices of final disposition announcing its decision to exempt these 10 individuals from the vision requirement in 49 CFR 391.41(b)(10). The final decision to grant an exemption to each of these individuals was based on the merits of each case and only after careful consideration of the comments received to its notices of applications. The notices of applications stated in detail the qualifications, experience, and medical condition of each applicant for an exemption from the vision requirements. That information is available by consulting the above cited **Federal Register** publications.

Interested parties or organizations possessing information that would otherwise show that any, or all of these

drivers, are not currently achieving the statutory level of safety should immediately notify FMCSA. The Agency will evaluate any adverse evidence submitted and, if safety is being compromised or if continuation of the exemption would not be consistent with the goals and objectives of 49 U.S.C. 31136(e) and 31315, FMCSA will take immediate steps to revoke the exemption of a driver.

Issued on: December 4, 2009.

Larry W. Minor,

Associate Administrator for Policy and Program Development.

[FR Doc. E9–29536 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

Surface Transportation Board

[STB Ex Parte No. 526 (Sub-No. 1)]

Notice of Railroad-Shipper Transportation Advisory Council Vacancy

AGENCY: Surface Transportation Board.

ACTION: Notice of vacancy on the Railroad-Shipper Transportation Advisory Council (RSTAC) and solicitation of nominations.

SUMMARY: The Surface Transportation Board (Board) hereby gives notice of one vacancy on RSTAC: a representative of a Class II or III railroad. The Board is soliciting suggestions for candidates to fill this vacancy.

DATES: Suggestions of candidates for membership on RSTAC are due on January 11, 2010.

ADDRESSES: Suggestions may be submitted either via the Board's e-filing format or in the traditional paper format. Any person using e-filing should attach a document and otherwise comply with the instructions at the E–FILING link on the Board's Web site, at *http://www.stb.dot.gov.* Any person submitting a filing in the traditional paper format should send an original and 10 copies to: Surface Transportation Board, Attn: STB Ex Parte No. 526 (Sub-No. 1), 395 E Street, SW., Washington, DC 20423–0001.

FOR FURTHER INFORMATION, CONTACT: Brian O'Boyle at 202–245–0536. Assistance for the hearing impaired is available through the Federal Information Relay Service (FIRS) at 1–800–877–8339.

SUPPLEMENTARY INFORMATION: The Board, created by Congress in 1996 to take over many of the functions previously performed by the Interstate Commerce Commission, exercises broad authority over transportation by rail carriers, including regulation of railroad rates and service (49 U.S.C. 10701–10747, 11101–11124), as well as the construction, acquisition, operation, and abandonment of rail lines (49 U.S.C. 10901–10907) and railroad line sales, consolidations, mergers, and common control arrangements (49 U.S.C. 10902, 11323–11327).

RSTAC was established upon the enactment of the ICC Termination Act of 1995 (ICCTA), on December 29, 1995, to advise the Board's Chairman, the Secretary of Transportation, the Committee on Commerce, Science, and Transportation of the Senate, and the Committee on Transportation and Infrastructure of the House of Representatives, with respect to rail transportation policy issues that RSTAC considers significant. RSTAC focuses on issues of importance to small shippers and small railroads, including car supply, rates, competition, and procedures for addressing claims. ICCTA directs RSTAC to develop private-sector mechanisms to prevent, or identify and address, obstacles to the most effective and efficient transportation system practicable. The Secretary of Transportation and the members of the Board cooperate with RSTAC in providing research, technical, and other reasonable support. RSTAC also prepares an annual report concerning its activities and recommendations on whatever regulatory or legislative relief it considers appropriate. RSTAC is not subject to the Federal Advisory Committee Act.

RSTAC consists of 19 members. Of this number, 15 members are appointed by the Chairman of the Board, and the remaining four members are the Secretary of Transportation and the Members of the Board, who serve as *ex officio,* nonvoting members of RSTAC. Of the 15 members to be appointed, nine members are voting members and are appointed from senior executive officers of organizations engaged in the railroad and rail shipping industries. At least four of the voting members must be representatives of small shippers as determined by the Chairman, and at least four of the voting members must be representatives of Class II or III railroads. The remaining six members to be appointed—three representing Class I railroads and three representing large shipper organizations—serve in a nonvoting, advisory capacity, but are entitled to participate in RSTAC deliberations.

RSTAC is required by statute to meet at least semi-annually, and has chosen to meet four times in 2010, with the first meeting tentatively scheduled in February 2010. Meetings are generally held at the Board's headquarters in Washington, DC, although some may be held in other locations.

The members of RSTAC receive no compensation for their services. RSTAC members are required to provide for the expenses incidental to their service, including travel expenses, as the Board cannot provide for these expenses. The RSTAC Chairman, however, may request funding from the Department of Transportation to cover travel expenses, subject to certain restrictions in ICCTA. RSTAC also may solicit and use private funding for its activities, again subject to certain restrictions in ICCTA. RSTAC members presently have elected to submit annual dues to pay for RSTAC expenses.

RSTAC members must be citizens of the United States and represent as broadly as practicable the various segments of the railroad and rail shipper industries. They may not be full-time employees of the United States. The members of RSTAC are appointed for a term of 3 years. A member may serve after the expiration of his or her term until a successor has taken office. No member will be eligible to serve in excess of two consecutive terms.

One vacancy currently exists for a 3-year term for a representative of a Class II or III railroad, beginning immediately upon appointment by the Chairman and ending on December 31, 2012. Suggestions for a member to fill this vacancy should be submitted in letter form, identifying the name of the candidate and a representation that the candidate is willing to serve a three-year term as a member of the RSTAC beginning in the Winter of 2010. Suggestions for a candidate for membership on RSTAC should be filed with the Board by January 11, 2010.

This action will not significantly affect either the quality of the human environment or the conservation of energy resources.

Authority: 49 U.S.C. 726.

Decided: December 7, 2009.

By the Board, Rachel D. Campbell, Director, Office of Proceedings.

Kulunie L. Cannon,

Clearance Clerk.

[FR Doc. E9–29517 Filed 12–10–09; 8:45 am]

BILLING CODE 4915–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Random Drug and Alcohol Testing Percentage Rates of Covered Aviation Employees for the Period of January 1, 2010, Through December 31, 2010

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice.

SUMMARY: The FAA has determined that the minimum random drug and alcohol testing percentage rates for the period January 1, 2010, through December 31, 2010, will remain at 25 percent of safety-sensitive employees for random drug testing and 10 percent of safety-sensitive employees for random alcohol testing.

FOR FURTHER INFORMATION CONTACT: Mr. Jeff Stookey, Office of Aerospace Medicine, Drug Abatement Division, Program Administration Branch (AAM–810), Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267–8442.

Discussion: Pursuant to 14 CFR 120.109(b), the FAA Administrator's decision on whether to change the minimum annual random drug testing rate is based on the reported random drug test positive rate for the entire aviation industry. If the reported random drug test positive rate is less than 1.00%, the Administrator may continue the minimum random drug testing rate at 25%. In 2008, the random drug test positive rate was 0.588%. Therefore, the minimum random drug testing rate will remain at 25% for calendar year 2010.

Similarly, 14 CFR 120.217(c), requires the decision on the minimum annual random alcohol testing rate to be based on the random alcohol test violation rate. If the violation rate remains less than 0.50%, the Administrator may continue the minimum random alcohol testing rate at 10%. In 2008, the random alcohol test violation rate was 0.123%. Therefore, the minimum random alcohol testing rate will remain at 10% for calendar year 2010.

SUPPLEMENTARY INFORMATION: If you have questions about how the annual random testing percentage rates are determined please refer to the Code of Federal Regulations Title 14, section 120.109(b) (for drug testing), and 120.217(c) (for alcohol testing).

Issued in Washington, DC on December 8, 2009.

James R. Fraser,

Deputy Federal Air Surgeon.

[FR Doc. E9–29601 Filed 12–10–09; 8:45 am]

BILLING CODE 4910–13–P

Federal Register

Friday,
December 11, 2009

Part II

Department of Energy

10 CFR Part 430

Energy Conservation Program: Energy Conservation Standards for Residential Water Heaters, Direct Heating Equipment, and Pool Heaters; Proposed Rule

DEPARTMENT OF ENERGY

10 CFR Part 430

[Docket Number EE–2006–BT–STD–0129]

RIN 1904–AA90

Energy Conservation Program: Energy Conservation Standards for Residential Water Heaters, Direct Heating Equipment, and Pool Heaters

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Notice of proposed rulemaking and public meeting.

SUMMARY: The Energy Policy and Conservation Act (EPCA) prescribes energy conservation standards for various consumer products and commercial and industrial equipment, including residential water heaters, direct heating equipment (DHE), and pool heaters. EPCA also requires the U.S. Department of Energy (DOE) to determine whether more stringent, amended standards for these products would be technologically feasible and economically justified, and would save a significant amount of energy. In this notice, DOE is proposing amended energy conservation standards for residential water heaters (other than tabletop and electric instantaneous models), gas-fired DHE, and gas-fired pool heaters. DOE also is announcing a public meeting to receive comment on these proposed standards and associated analyses and results.

DATES: DOE will hold a public meeting on Thursday, January 7, 2010, from 9 a.m. to 4 p.m., in Washington, DC. DOE must receive requests to speak at the public meeting before 4 p.m., Wednesday, December 23, 2009. DOE must receive a signed original and an electronic copy of statements to be given at the public meeting before 4 p.m., Wednesday, December 30, 2009.

DOE will accept comments, data, and information regarding this notice of proposed rulemaking (NOPR) before and after the public meeting, but no later than February 9, 2010. See section VII, ''Public Participation,'' of this NOPR for details.

ADDRESSES: The public meeting will be held at the U.S. Department of Energy, Forrestal Building, Room 1E–245, 1000 Independence Avenue, SW., Washington, DC 20585–0121. To attend the public meeting, please notify Ms. Brenda Edwards at (202) 586–2945. Please note that foreign nationals visiting DOE Headquarters are subject to advance security screening procedures. Any foreign national wishing to participate in the meeting should advise DOE as soon as possible by contacting Ms. Brenda Edwards to initiate the necessary procedures.

Any comments submitted must identify the NOPR for Energy Conservation Standards for Heating Products, and provide the docket number EE–2006–BT–STD–0129 and/or regulatory information number (RIN) number 1904–AA90. Comments may be submitted using any of the following methods:

1. *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.

2. *E-mail: ResWaterDirectPoolHtrs@ee.doe.gov.* Include docket number EE–2006–BT–STD–0129 and/or RIN 1904–AA90 in the subject line of the message.

3. *Mail:* Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, Mailstop EE–2J, 1000 Independence Avenue, SW., Washington, DC 20585–0121. Please submit one signed paper original.

4. *Hand Delivery/Courier:* Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, 950 L'Enfant Plaza, SW., Suite 600, Washington, DC 20024. Telephone: (202) 586–2945. Please submit one signed paper original.

For detailed instructions on submitting comments and additional information on the rulemaking process, see section VII of this document (Public Participation).

Docket: For access to the docket to read background documents or comments received, visit the U.S. Department of Energy, Resource Room of the Building Technologies Program, 950 L'Enfant Plaza, SW., Suite 600, Washington, DC, (202) 586–2945, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Please call Ms. Brenda Edwards at the above telephone number for additional information regarding visiting the Resource Room.

FOR FURTHER INFORMATION CONTACT: Mr. Mohammed Khan, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, EE–2J, 1000 Independence Avenue, SW., Washington, DC 20585–0121. Telephone: (202) 586–7892. E-mail: *Mohammed.Khan@ee.doe.gov.*

Mr. Eric Stas or Mr. Michael Kido, U.S. Department of Energy, Office of the General Counsel, GC–72, 1000 Independence Avenue, SW., Washington, DC 20585–0121. Telephone: (202) 586–9507. E-mail: *Eric.Stas@hq.doe.gov* or *Michael.Kido@hq.doe.gov.*

For information on how to submit or review public comments and on how to participate in the public meeting, contact Ms. Brenda Edwards, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, EE–2J, 1000 Independence Avenue, SW., Washington, DC 20585–0121. Telephone: (202) 586–2945. E-mail: *Brenda.Edwards@ee.doe.gov.*

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VIII. Approval of the Office of the Secretary

I. Summary of the Proposed Rule

The Energy Policy and Conservation Act (42 U.S.C. 6291 *et seq.;* EPCA or the Act), as amended, provides that any new or amended energy conservation standard DOE prescribes for certain consumer products, including residential water heaters, direct heating equipment (DHE), and pool heaters (collectively referred to in this document as the ''three heating products''), shall be designed to ''achieve the maximum improvement in energy efficiency * * * which the Secretary determines is technologically feasible and economically justified.'' (42 U.S.C. 6295(o)(2)(A)) Furthermore, the new or amended standard must ''result in significant conservation of energy.'' (42 U.S.C. 6295(o)(3)(B)) In accordance with these and other statutory provisions discussed in this notice, DOE proposes amended energy conservation standards for the three types of heating products listed above. Compliance with the proposed standards would be required for all residential water heaters listed in Table I.1 that are manufactured in or imported into the United States on or after five years after the date of publication of the final rule. The proposed standards would apply to all DHE and pool heaters listed in Table I.1 that are manufactured in or imported into the United States on or after three years after the date of publication of the final rule. Table I.1 sets forth the proposed standards for the products that are the subject of this rulemaking.

TABLE I.1—PROPOSED AMENDED ENERGY CONSERVATION STANDARDS FOR RESIDENTIAL WATER HEATERS, DIRECT HEATING EQUIPMENT, AND POOL HEATERS

Product class	Proposed standard level	
Residential water heaters *		
Gas-fired Storage	For tanks with a Rated Storage Volume at or below 60 gallons: EF = 0.675 − (0.0012 × Rated Storage Volume in gallons).	For tanks with a Rated Storage Volume above 60 gallons: EF = 0.717 − (0.0019 × Rated Storage Volume in gallons).
Electric Storage	For tanks with a Rated Storage Volume at or below 80 gallons: EF = 0.96 − (0.0003 × Rated Storage Volume in gallons).	For tanks with a Rated Storage Volume above 80 gallons: EF = 1.088 − (0.0019 × Rated Storage Volume in gallons).
Oil-fired Storage	EF = 0.68 − (0.0019 × Rated Storage Volume in gallons).	
Gas-fired Instantaneous	EF = 0.82 − (0.0019 × Rated Storage Volume in gallons).	

Product class	Proposed standard level
Direct heating equipment **	
Gas wall fan type up to 42,000 Btu/h	AFUE = 76%
Gas wall fan type over 42,000 Btu/h	AFUE = 77%
Gas wall gravity type up to 27,000 Btu/h	AFUE = 70%
Gas wall gravity type over 27,000 Btu/h up to 46,000 Btu/h	AFUE = 71%
Gas wall gravity type over 46,000 Btu/h	AFUE = 72%
Gas floor up to 37,000 Btu/h	AFUE = 57%
Gas floor over 37,000 Btu/h	AFUE = 58%
Gas room up to 20,000 Btu/h	AFUE = 62%
Gas room over 20,000 Btu/h up to 27,000 Btu/h	AFUE = 67%
Gas room over 27,000 Btu/h up to 46,000 Btu/h	AFUE = 68%
Gas room over 46,000 Btu/h	AFUE = 69%
Gas hearth up to 20,000 Btu/h	AFUE = 61%
Gas hearth over 20,000 Btu/h and up to 27,000 Btu/h	AFUE = 66%
Gas hearth over 27,000 Btu/h and up to 46,000 Btu/h	AFUE = 67%
Gas hearth over 46,000 Btu/h	AFUE = 68%
Pool heaters	
Gas-fired	Thermal Efficiency = 84%

* EF is the ''energy factor,'' and the ''Rated Storage Volume'' equals the water storage capacity of a water heater (in gallons), as specified by the manufacturer.

** Btu/h is ''British thermal units per hour'' and AFUE is ''Annual Fuel Utilization Efficiency.''

DOE's analyses indicate that the proposed standards would save a significant amount of energy—an estimated 2.85 quads of cumulative energy over a 30-year period. This amount is equivalent to 61 days of U.S. gasoline use. Breaking these figures down by product type, the national energy savings of the proposed standards is estimated to be 2.60 quads for residential water heaters, 0.22 quads for DHE, and 0.03 quads for pool heaters.

The cumulative national net present value (NPV) of total consumer costs and savings from the proposed standards (in 2008$) ranges from $5.73 billion (at 7-percent discount rate) to $18.1 billion (at 3-percent discount rate). This is the estimated total value of future operating-cost savings minus the estimated increased product and installation costs, discounted to 2010.

The NPV of the proposed standards for water heaters ranges from $4.79 billion (7-percent discount rate) to $15.6 billion (3-percent discount rate). DOE estimates the industry net present value (INPV) for water heaters to be approximately $1,455 million in 2008$. If DOE adopts the proposed standards, it estimates U.S. water heater manufacturers will lose between 0.2 percent and 5.6 percent of the INPV, which is approximately −$2.4 to −$81.0 million. However, the NPV for consumers (at the 7-percent discount rate) is 59 to 1996 times larger than the industry losses due to the proposed standards with the 7-percent discount rate, and 193 to 6500 times larger than the industry losses due to the proposed standards with the 3-percent discount rate.

For DHE, the NPV of the proposed standards ranges from $0.91 billion (7-percent discount rate) to $2.22 billion (3-percent discount rate). DOE estimates the INPV for DHE to be approximately $104 million in 2008$. If DOE adopts the proposed standards, it estimates U.S. DHE manufacturers will lose between 1.9 percent and 5.9 percent of the INPV, which is approximately −$2.0 to −$6.2 million. However, the NPV for consumers (at the 7-percent discount rate) is 147 to 455 times larger than the industry losses due to the proposed standards with the 7-percent discount rate, and 358 to 1,110 times larger than the industry losses due to the proposed standards with the 3-percent discount rate.

For pool heaters, the NPV of the proposed standard ranges from $0.03 billion (7-percent discount rate) to $0.25 billion (3-percent discount rate). DOE estimates the INPV for pool heaters to be approximately $61.4 million in 2008$. If DOE adopts the proposed standards, it expects the impacts on U.S. pool heater manufacturers will be between a gain of 0.9 percent and a loss of 12.1 percent of the INPV, which is approximately −$0.5 million to −$7.5 million. However, the NPV for consumers (at the seven-percent discount rate) is 4 to 60 times larger than the industry losses due to the proposed standards at the 7-percent discount rate, and 33 to 498 times larger than the industry losses due

to the proposed standards at the 3-percent discount rate.

The economic impacts of the proposed standards on individual consumers (*i.e.,* the average life-cycle cost (LCC) savings) are predominately positive. For water heaters, DOE projects that the average LCC impact is a gain of $68 for gas-fired storage water heaters, $39 for electric storage water heaters, and $395 for oil-fired storage water heaters, and no change for gas-fired instantaneous water heaters. For DHE, DOE projects that the average LCC impact for consumers is a gain of $104 for gas wall fan DHE, $192 for gas wall gravity DHE, $13 for gas floor DHE, $143 for gas room DHE, and $96 for gas hearth DHE. For pool heaters, DOE projects that the average LCC impact for consumers is a loss of $13 (which represents only 0.2 percent of the average total LCC).

In addition, the proposed standards would be expected to provide significant environmental benefits. The proposed standards would potentially result in cumulative greenhouse gas emission reductions of 167 million tons (Mt) of carbon dioxide (CO_2) from 2013 to 2045. Specifically, the proposed standards for water heaters would reduce CO_2 emissions by 154 Mt; the proposed standards for DHE would reduce CO_2 emissions by 8.5 Mt; and the proposed standard for pool heaters would reduce CO_2 emissions by 4.2 Mt. For the three types of heating products together, DOE estimates that the range of the monetized value of CO_2 emission reductions based on global estimates of the value of avoided CO_2 is $0.399 billion to $4.386 billion at a 7-percent discount rate and $0.902 billion to $9.925 billion at a 3-percent discount rate.

The proposed standards would also be expected to result in reduction in cumulative nitrogen oxides (NO_X) emissions of 129 kilotons (kt). Specifically, the proposed water heater standards would result in cumulative NO_X emissions reductions of 118 kt; the proposed standards for DHE would result in 7.7 kt of NO_X emissions reductions; and the proposed standard for pool heaters would result in 3.7 kt of NO_X emissions reductions.

The proposed standards for heating products would also be expected to result in power plant mercury (Hg) emissions reductions. For water heaters, cumulative Hg emissions would be reduced by 0.20 tons (t). The proposed standards for DHE and pool heaters would be expected to have a negligible impact on mercury emissions.

The benefits and costs of today's proposed rule can also be expressed in terms of annualized values. The annualized values refer to consumer operating cost savings, consumer incremental product and installation costs, the quantity of emissions reductions for CO_2, NO_X, and Hg, and the monetary value of emissions reductions. DOE calculated annualized values using discount rates of three percent and seven percent. Although DOE calculated annualized values, this does not imply that the time-series of cost and benefits from which the annualized values were determined are a steady stream of payments.

Table I.2, Table I.3, and Table I.4 present the annualized values for the standards proposed for water heaters, DHE, and pool heaters, respectively. The tables also present the annualized net benefit that results from summing the two monetary benefits and subtracting the consumer incremental product and installation costs. Although summing the value of operating cost savings with the value of CO_2 reductions (and other emissions reductions) provides a valuable perspective, please note the following. The operating cost savings are domestic U.S. consumer monetary savings found in market transactions, but in contrast, the CO_2 value is based on an estimate of imputed marginal social cost of carbon (SCC), which is meant to reflect the global benefits of CO_2 reductions. In addition, the assessments of operating cost savings and CO_2 savings are performed with different computer models, leading to different time frames for analysis. The operating cost savings are measured for the lifetime of appliances shipped in 2015–2045 or 2013–2043. The value of CO_2, on the other hand is meant to reflect the present value of all future climate-related impacts, even those beyond 2065.

TABLE I.2—ANNUALIZED BENEFITS AND COSTS OF PROPOSED STANDARDS FOR WATER HEATERS (TSL 4)

Category	Unit	Primary estimate (*AEO* reference case)		Low estimate (*AEO* low-growth case)		High estimate (*AEO* high-growth case)	
		7%	3%	7%	3%	7%	3%
Benefits							
Monetized Operating Cost Savings	Million 2008$	1487.1	1842.4	1383.7	1708.4	1590.5	1976.2
Quantified Emissions Reductions	CO_2 (Mt)	4.58	4.92	5.34	5.28	0.61	1.04
	NO_X (kt)	3.54	3.79	4.17	4.11	0.58	0.92
	Hg (t)	0.009	0.008	(0.003)	(0.011)	0.010	0.013
Monetized Avoided Emissions Reductions * (Million 2008$).	CO_2 (at $20/t)	157.1	187.3	184.8	222.1	20.2	41.9
	NO_X	8.2	9.1	9.7	10.9	0.4	1.6
	Hg	0.1	0.1	(0.1)	(0.1)	0.1	0.2
Costs							
Monetized Incremental Product and Installation Costs.	Million 2008$	945.5	917.3	894.4	861.7	997.0	973.4
Net Benefits							
Monetized Value **	Million 2008$	698.8	1112.4	674.1	1068.9	613.7	1044.7

* For CO_2, benefits reflect value of $20/t, which is in the middle of the values considered by DOE for valuing the potential global benefits resulting from reduced CO_2 emissions. For NO_X and Hg, the benefits reflect values of $2,491/t and $17 million/t, respectively. These values are the midpoint of the range considered by DOE.

** Monetized Value does not include monetized avoided emissions reductions for NO_X and Hg.

TABLE I.3—ANNUALIZED BENEFITS AND COSTS OF PROPOSED STANDARDS FOR DIRECT HEATING EQUIPMENT (TSL 3)

Category	Unit	Primary estimate (*AEO* reference case)		Low estimate (*AEO* low-growth case)		High estimate (*AEO* high-growth case)	
		7%	3%	7%	3%	7%	3%
Benefits							
Monetized Operating Cost Savings	Million 2008$	132.2	164.4	126.4	156.9	136.2	169.6
Quantified Emissions Reductions	CO_2 (Mt)	0.24	0.27	0.43	0.46	0.13	0.14
	NO_X (kt)	0.22	0.24	0.36	0.38	0.14	0.15
	Hg (t)	0.000	(0.001)	0.000	(0.001)	0.000	0.000
Monetized Avoided CO_2 Value (at $20/t).*	Million 2008$	8.2	9.8	2.5	2.9	21.0	42.6
Costs							
Monetized Incremental Product and Installation Costs.	Million 2008$	41.8	40.6	41.8	40.6	41.8	40.6
Net Benefits							
Monetized Value	Million 2008$	98.5	133.5	87.1	119.2	115.4	171.6

* For CO_2, benefits reflect value of $20/t, which is in the middle of the values considered by DOE for valuing the potential global benefits resulting from reduced CO_2 emissions. For NO_X and Hg, the annual benefits are very small and are thus not reported in the table.

TABLE I.4—ANNUALIZED BENEFITS AND COSTS OF PROPOSED STANDARDS FOR POOL HEATERS (TSL 4)

Category	Unit	Primary estimate (*AEO* reference case)		Low estimate (*AEO* low-growth case)		High estimate (*AEO* high-growth case)	
		7%	3%	7%	3%	7%	3%
Benefits							
Monetized Operating Cost Savings	Million 2008$	59.88	68.79	57.29	65.66	61.62	70.86
Quantified Emissions Reductions	CO_2 (Mt)	0.13	0.13	0.16	0.17	0.09	0.10
	NO_X (kt)	0.112	0.119	0.134	0.143	0.085	0.091
	Hg (t)	0.000	0.000	(0.000)	(0.001)	(0.000)	0.000
Monetized Avoided CO_2 Value (at $20/t).*	Million 2008$	4.20	4.84	5.24	6.08	3.01	3.47
Costs							
Monetized Incremental Product and Installation Costs.	2008$	56.66	54.59	56.66	54.59	56.66	54.59
Net Benefits							
Monetized Value	Million 2008$	7.41	19.04	5.88	17.15	7.97	19.74

* For CO_2, benefits reflect value of $20/t, which is in the middle of the values considered by DOE for valuing the potential global benefits resulting from reduced CO_2 emissions. For NO_X and Hg, the annual benefits are very small and are thus not reported in the table.

DOE has tentatively concluded that the proposed standards represent the maximum improvement in energy efficiency that is technologically feasible and economically justified, and would result in significant conservation of energy. Products achieving these standard levels are already commercially available. Based on the analyses culminating in this proposal, DOE found the benefits to the Nation of the proposed standards (energy savings, consumer LCC savings, national NPV increase, and emission reductions) outweigh the burdens (loss of INPV and LCC increases for some consumers). DOE considered higher efficiency levels as trial standard levels, and is still considering them in this rulemaking; however, DOE has tentatively concluded that the burdens of the higher efficiency levels would outweigh the benefits. With that said, based on consideration of public comments DOE receives in response to this notice and related information, DOE may adopt efficiency levels in the final rule that are either higher or lower than the proposed standards, or some level(s) in between the proposed standards and other efficiency levels presented.

DOE is proposing TSL 4 for residential water heaters as the level which it has tentatively concluded meet the applicable statutory criteria (i.e., the highest level that is technologically feasible, economically justified, and would result in significant conservation of energy). Based upon public comments and any accompanying data submissions, DOE would strongly consider other TSLs (as presented in this NOPR or at some level in between), some of which might provide an even higher level of energy savings and promote a market for advanced water heating technologies, including heat pump and condensing water heaters. Accordingly, DOE is presenting a variety of issues throughout today's notice upon which it is seeking

comment which will bear upon its consideration of TSL 5 or TSL 6 for residential water heaters in the final rule.

II. Introduction

A. Consumer Overview

EPCA currently prescribes energy conservation standards for the three heating products that are the subject of this rulemaking. DOE is proposing to raise the standards for the products shown in Table I.1. The proposed standards would apply to residential water heaters manufactured or imported on or after five years after the final rule publication date (*i.e.*, approximately March 31, 2015). The proposed standards would apply to DHE and pool heaters manufactured or imported on or after three years after the final rule publication date (*i.e.*, approximately March 31, 2013).

DOE's analyses suggest that consumers would realize benefits from the proposed standards. Although DOE expects that the purchase price of the more-efficient heating products would be higher than the average prices of these products today, for most consumers, the energy efficiency gains would result in lower energy costs that would more than offset the higher purchase price. For water heaters, the median payback period is 2.7 years for gas-fired storage water heaters, 5.8 years for electric storage water heaters, 0.5 years for oil-fired storage water heaters, and 23.5 years for gas-fired instantaneous water heaters. For DHE, the median payback period is 6.0 years for gas wall fan DHE, 8.3 years for gas wall gravity DHE, 14.7 years for gas floor DHE, 5.3 years for gas room DHE and 0.0 years for gas hearth DHE. (The reason that the median payback period for gas hearth DHE is zero is because for about two-thirds of the consumers, there is no incremental cost to get to the proposed standard level). For pool heaters, the median payback period is 13.0 years.

When the overall net savings are summed over the lifetime of these products, water heater consumers will save, on average, $68 for gas-fired storage water heaters, $30 for electric storage water heaters, $305 for oil-fired storage water heaters, and $0 for gas-fired instantaneous water heaters, compared to their life-cycle expenditures on base-case water heaters (*i.e.*, the equipment expected to be purchased in the absence of revised energy conservation standards). (For gas-fired instantaneous water heaters, the average LCC for the proposed standard level is the same as the average LCC in the base case, so the savings are zero.) The average LCC impact for DHE consumers is a gain of $104 for gas wall fan DHE, $192 for gas wall gravity DHE, $13 for gas floor DHE, $143 for gas room DHE, and $96 for gas hearth DHE, compared to their life-cycle expenditures on base-case products. Pool heater consumers will see, on average, a slight increase in their life-cycle costs, compared to their expenditures on base-case products.

B. Authority

Title III of EPCA sets forth a variety of provisions designed to improve energy efficiency. Part A [1] of Title III (42 U.S.C. 6291–6309) establishes the Energy Conservation Program for Consumer Products Other Than Automobiles. The program covers consumer products and certain commercial equipment (referred to hereafter as ''covered products''), including the three types of heating products that are subject to this rulemaking. (42 U.S.C. 6292(a)(4), (9) and (11)) EPCA prescribes energy conservation standards for the three heating products. (42 U.S.C. 6295(e)(1)–(3)) The statute further directs DOE to conduct two cycles of rulemakings to determine whether to amend these standards. (42 U.S.C. 6295(e)(4)) As explained in further detail in section II.C, ''Background,'' this rulemaking represents the second round of amendments to the water heater standards, and the first round of amendments to the DHE and pool heater standards.

Under the Act, DOE's energy conservation program for covered products consists essentially of three parts: (1) Testing; (2) labeling; and (3) Federal energy conservation standards. The Federal Trade Commission (FTC) is responsible for the labeling provisions for consumer products, and DOE implements the remainder of the program. Section 323 of the Act authorizes DOE, subject to certain criteria and conditions, to develop test procedures to measure the energy efficiency, energy use, or estimated annual operating cost of each covered product. Manufacturers of covered products must use the DOE test procedure as the basis for certifying to DOE that their products comply with applicable energy conservation standards adopted under EPCA and for representing the efficiency of those products. Similarly, DOE must use these test procedures to determine whether the products comply with standards adopted under EPCA. (42 U.S.C. 6293) The test procedures for water heaters, unvented DHE, vented DHE, and pool heaters appear at Title 10 Code of Federal Regulations (CFR) part 430, subpart B, appendices E, G, O, and P, respectively.

EPCA provides criteria for prescribing amended standards for covered products. As indicated above, any amended standard for a covered product must be designed to achieve the maximum improvement in energy efficiency that is technologically feasible and economically justified. (42 U.S.C. 6295(o)(2)(A)) Furthermore, EPCA precludes DOE from adopting any standard that would not result in significant conservation of energy. (42 U.S.C. 6295(o)(3)(B)) Moreover, DOE may not prescribe a standard for certain products (including the three heating products) if no test procedure has been established. (42 U.S.C. 6295(o)(3)(A)) The Act also provides that, in deciding whether a standard is economically justified, DOE must determine whether the benefits of the standard exceed its burdens. (42 U.S.C. 6295(o)(2)(B)(i)) DOE must do so after receiving comments on the proposed standard and by considering, to the greatest extent practicable, the following seven factors:

1. The economic impact of the standard on manufacturers and consumers of the products subject to the standard;

2. The savings in operating costs throughout the estimated average life of the covered products in the type (or class) compared to any increase in the price, initial charges, or maintenance expenses for the covered products that are likely to result from the imposition of the standard;

3. The total projected amount of energy (or, as applicable, water) savings likely to result directly from the imposition of the standard;

4. Any lessening of the utility or the performance of the covered products likely to result from the imposition of the standard;

5. The impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the imposition of the standard;

6. The need for national energy and water conservation; and

7. Other factors the Secretary considers relevant.

(42 U.S.C. 6295(o)(2)(B)(i)(I)–(VII))

Furthermore, EPCA contains what is commonly known as an ''anti-backsliding'' provision, which prohibits

[1] This part was originally titled Part B. It was redesignated Part A in the United States Code for editorial reasons.

the Secretary from prescribing any amended standard that either increases the maximum allowable energy use or decreases the minimum required energy efficiency of a covered product. (42 U.S.C. 6295(o)(1)) Also, the Secretary may not prescribe a new or amended standard if interested persons have established by a preponderance of the evidence that the standard is likely to result in the unavailability in the United States of any covered product type (or class) with performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those generally available in the United States. (42 U.S.C. 6295(o)(4))

Under 42 U.S.C. 6295(o)(2)(B)(iii), EPCA establishes a rebuttable presumption that a standard is economically justified if the Secretary finds that ''the additional cost to the consumer of purchasing a product complying with an energy conservation standard level will be less than three times the value of the energy * * * savings during the first year that the consumer will receive as a result of the standard, as calculated under the applicable test procedure. * * *''

Under 42 U.S.C. 6295(q)(1), EPCA specifies requirements for promulgation of a standard for a type or class of covered product that has two or more subcategories. DOE must specify a different standard level than that which applies generally to such type or class of products ''for any group of covered products which have the same function or intended use, if * * * products within such group—(A) consume a different kind of energy from that consumed by other covered products within such type (or class); or (B) have a capacity or other performance-related feature which other products within such type (or class) do not have and such feature justifies a higher or lower standard'' than applies or will apply to the other products. (42 U.S.C. 6295(q)(1)) In determining whether a performance-related feature justifies a different standard for a group of products, DOE must ''consider such factors as the utility to the consumer of such a feature'' and other factors DOE deems appropriate. *Id.* Any rule prescribing such a standard must include an explanation of the basis on which such higher or lower level was established. (42 U.S.C. 6295(q)(2))

Federal energy conservation requirements generally supersede State laws or regulations concerning energy conservation testing, labeling, and standards. (42 U.S.C. 6297(a)–(c)) However, DOE can grant waivers of Federal preemption for particular State laws or regulations in accordance with the procedures and other provisions of section 327(d) of the Act. (42 U.S.C. 6297(d))

Finally, section 310(3) of the Energy Independence and Security Act of 2007 (EISA 2007; Pub. L. 110–140) amended EPCA to prospectively require that energy conservation standards address standby mode and off mode energy use. Specifically, when DOE adopts new or amended standards for a covered product after July 1, 2010, the final rule must, if justified by the criteria for adoption of standards in section 325(o) of EPCA, incorporate standby mode and off mode energy use into a single standard if feasible, or otherwise adopt a separate standard for such energy use for that product. (42 U.S.C. 6295(gg)(3)) Because the final rule in this rulemaking is scheduled for adoption by March 2010, this requirement does not apply in this rulemaking, and DOE has not attempted to address the standby mode or off mode energy use here. DOE is currently working on a test procedure rulemaking to address standby mode and off mode energy consumption for the three types of heating products that are the subject of this rulemaking.

C. Background

1. Current Standards

a. Water Heaters

On January 17, 2001, DOE prescribed the current energy conservation standards for residential water heaters manufactured on or after January 20, 2004. 66 FR 4474. This final rule completed the first amended standards rulemaking for water heaters required under 42 U.S.C. 6295(e)(4)(A). The standards consist of minimum energy factors (EF) that vary based on the storage volume of the water heater, the type of energy it uses (*i.e.*, gas, oil, or electricity), and whether it is a storage, instantaneous, or tabletop model. 10 CFR 430.32(d). The water heater energy conservation standards are set forth in Table II.1 below.

TABLE II.1—CURRENT FEDERAL ENERGY CONSERVATION STANDARDS FOR RESIDENTIAL WATER HEATERS

Product class	Energy factor as of January 20, 2004
1. Gas-Fired Storage Water Heater	EF = 0.67 − (0.0019 × Rated Storage Volume in gallons).
2. Oil-Fired Storage Water Heater	EF = 0.59 − (0.0019 × Rated Storage Volume in gallons).
3. Electric Storage Water Heater	EF = 0.97 − (0.00132 × Rated Storage Volume in gallons).
4. Tabletop Water Heater	EF = 0.93 − (0.00132 × Rated Storage Volume in gallons).
5. Gas-Fired Instantaneous Water Heater	EF = 0.62 − (0.0019 × Rated Storage Volume in gallons).
6. Instantaneous Electric Water Heater	EF = 0.93 − (0.00132 × Rated Storage Volume in gallons).

b. Direct Heating Equipment

EPCA prescribes the energy conservation standards for DHE, which apply to gas-fired products manufactured on or after January 1, 1990. (42 U.S.C. 6295(e)(3)) These standards consist of several minimum annual fuel utilization efficiency (AFUE) levels, each of which applies to units of a particular type (*i.e.*, wall fan, wall gravity, floor, room) and heating capacity range. *Id.* These statutory standards have been codified in DOE's regulations at 10 CFR 430.32(i). The DHE energy conservation standards are set forth in Table II.2 below. DOE notes that while electric DHE are available, standards for these products are outside the scope of today's rulemaking. See IV.A.1.b for a more detailed discussion of DHE coverage under EPCA.

TABLE II.2—CURRENT FEDERAL ENERGY CONSERVATION STANDARDS FOR DIRECT HEATING EQUIPMENT

Direct heating equipment design type	Product class Btu/h	Annual fuel utilization efficiency, as of Jan. 1, 1990 %
Gas Wall Fan	Up to 42,000	73
	Over 42,000	74
Gas Wall Gravity	Up to 10,000	59
	Over 10,000 and up to 12,000	60
	Over 12,000 and up to 15,000	61
	Over 15,000 and up to 19,000	62
	Over 19,000 and up to 27,000	63
	Over 27,000 and up to 46,000	64
	Over 46,000	65
Gas Floor	Up to 37,000	56
	Over 37,000	57
Gas Room	Up to 18,000	57
	Over 18,000 and up to 20,000	58
	Over 20,000 and up to 27,000	63
	Over 27,000 and up to 46,000	64
	Over 46,000	65

c. Pool Heaters

EPCA requires pool heaters manufactured on or after January 1, 1990 to have a thermal efficiency no less than 78 percent. The thermal efficiency for this product is measured by testing in accordance with the DOE test procedure for pool heaters codified in 10 CFR 430, subpart B, Appendix P. The statutory standard for pool heaters has been codified in DOE's regulations at 10 CFR 430.32(k).

2. History of Standards Rulemaking for Water Heaters, Direct Heating Equipment, and Pool Heaters

Before being amended by the National Appliance Energy Conservation Act of 1987 (NAECA; Pub. L. 100–12), Title III of EPCA included water heaters and home heating equipment as covered products. NAECA's amendments to EPCA included replacing the term ''home heating equipment'' with ''direct heating equipment,'' adding pool heaters as a covered product, establishing energy conservation standards for these two products as well as residential water heaters, and requiring that DOE determine whether these standards should be amended. (42 U.S.C. 6295(e)(1)–(4)) As indicated above, DOE amended the statutorily-prescribed standards for water heaters in 2001 (66 FR 4474 (Jan. 17, 2001)), but has not amended the statutory standards for DHE or pool heaters.

DOE initiated this rulemaking on September 27, 2006, by publishing on its Web site its ''Rulemaking Framework for Residential Water Heaters, Direct Heating Equipment, and Pool Heaters.'' (A PDF of the framework document is available at *http://www.eere.energy.gov/buildings/appliance_standards/residential/pdfs/heating_equipment framework_092706.pdf*.) DOE also published a notice announcing the availability of the framework document and a public meeting and requesting comments on the matters raised in the document. 71 FR 67825 (Nov. 24, 2006). The framework document described the procedural and analytical approaches that DOE anticipated using to evaluate potential energy conservation standards for the three heating products and identified various issues to be resolved in conducting the rulemaking.

DOE held the public meeting on January 16, 2007, where it: Presented the contents of the framework document; described the analyses it planned to conduct during the rulemaking; sought comments from interested parties on these subjects; and in general, sought to inform interested parties about, and facilitate their involvement in, the rulemaking. Interested parties that participated in the public meeting discussed the following issues: the scope of coverage for the rulemaking; product classes; efficiency levels analyzed in the engineering analysis; installation, repair, and maintenance costs; and product and fuel switching. At the meeting and during the public comment period, DOE received many comments that helped DOE identify and resolve the issues involved in this rulemaking to consider amended energy conservation standards for the three types of heating products.

DOE then gathered additional information and performed preliminary analyses to help develop the potential energy conservation standards for the three heating products. This process culminated in DOE's announcement of another public meeting to discuss and receive comments on the following matters: The product classes DOE planned to analyze; the analytical framework, models, and tools that DOE has been using to evaluate standards; the results of the preliminary analyses DOE performed; and potential standard levels that DOE could consider. 74 FR 1643 (Jan. 13, 2009) (the January 2009 notice). DOE also invited written comments on these subjects and announced the availability of a preliminary technical support document (preliminary TSD) to inform interested parties and enable them to provide comments. *Id.* (The preliminary TSD is available at: *http://www1.eere.energy.gov/buildings/appliance_standards/residential/water_pool_heaters_prelim_tsd.html*.) DOE stated its interest in receiving comments on other relevant issues that participants believe DOE should address in this NOPR, which would affect energy conservation standards for the three heating products. *Id.* at 1646.

The preliminary TSD provided an overview of the activities DOE undertook in developing potential standard levels for the three heating products and discussed the comments DOE received in response to the framework document. It also described the analytical framework that DOE used (and continues to use in this rulemaking), including a description of the methodology, the analytical tools, and the relationships among the various analyses that are part of the rulemaking. The preliminary TSD described in detail each analysis DOE performed up to that point, including inputs, sources,

methodologies, and results. DOE examined each of the three heating products in each of the following analyses:

- A *market and technology assessment* addressed the scope of this rulemaking (*i.e.*, which types of heating products this rulemaking covers), identified the potential classes for each product, characterized the markets for these products, and reviewed techniques and approaches for improving product efficiency.
- A *screening analysis* reviewed technology options to improve the efficiency of each of the three heating products and weighed these options against DOE's four prescribed screening criteria (*i.e.*, technological feasibility; practicability to manufacture, install, and service; adverse impacts on product utility or product availability; and adverse impacts on health or safety).
- An *engineering analysis* estimated the manufacturer selling prices (MSPs) associated with more efficient water heaters, DHE, and pool heaters.
- An *energy use analysis* estimated the annual energy use in the field of each of the three heating products.
- A *markups analysis* developed factors to convert estimated MSPs derived from the engineering analysis to consumer prices.
- A *life-cycle cost analysis* calculated, at the consumer level, the discounted savings in operating costs throughout the estimated average life of the product compared to any increase in installed costs likely to result directly from a given standard.
- A *payback period (PBP) analysis* estimated the amount of time it takes consumers to recover the higher purchase expense of more energy efficient products through lower operating costs.
- A *shipments analysis* estimated shipments of each of the three heating products over the time period examined in the analysis (*i.e.,* 2015–2045 for water heaters and 2013–2043 for DHE and pool heaters) under both a base-case scenario (*i.e.,* assuming no new standards) and a standards-case scenario (*i.e.,* assuming new standards at the various levels under consideration). The shipments analysis provides key inputs to the national impact analysis (NIA).
- A *national impact analysis* assessed the aggregate impacts at the national level of potential energy conservation standards for each of the three heating products, as measured by the net present value of total consumer economic impacts and national energy savings.
- A *preliminary manufacturer impact analysis* took the initial steps in evaluating the effects on manufacturers of potential new efficiency standards.

In the January 2009 notice, DOE summarized in detail the nature and function of the following analyses: (1) Engineering, (2) energy use characterization, (3) markups to determine installed prices, (4) LCC and PBP analyses, and (5) national impact analysis. 74 FR 1643, 1645–46 (Jan. 13, 2009).

The public meeting announced in the January 2009 notice took place on February 9, 2009. At this meeting, DOE presented the methodologies and results of the analyses set forth in the preliminary TSD. The major topics discussed at the February 2009 public meeting included the product classes for the rulemaking, the treatment of ultra-low NO_X water heaters, heat pump water heaters screening considerations, installation costs and concerns for heat pump water heaters, the manufacturing costs for max-tech products, pool heater shipments, the energy-use adjustment for gas-fired instantaneous water heaters, and the compliance dates for amended standards. The comments received since publication of the January 2009 notice, including those received at the February 2009 public meeting, have contributed to DOE's proposed resolution of the issues in this rulemaking. This NOPR quotes and summarizes many of these comments, and responds to the issues they raised. (A parenthetical reference at the end of a quotation or paraphrase provides the location of the relevant source in the public record.)

III. General Discussion

A. Test Procedures

As noted above, DOE's current test procedures for water heaters, vented DHE, and pool heaters appear at Title 10 Code of Federal Regulations (CFR) part 430, subpart B, appendices E, O, and P, respectively. DOE uses these test procedures to determine whether the products comply with standards adopted under EPCA. (42 U.S.C. 6293)

1. Water Heaters

During the preliminary analysis, DOE received a number of comments on the test procedure for residential water heaters. Edison Electric Institute (EEI) stated that DOE should modify the values for hot water use and the number of daily draws in the water heater test procedure to more closely resemble field conditions (*i.e.,* include more shorter draws, rather than fewer longer draws), and SEISCO INTERNATIONAL (SEISCO) recommended the adoption of a testing protocol for water heaters that can best simulate real world usage patterns. (EEI, No. 40 at p.5; SEISCO, No. 41 at p. 3) [2] Southern Company (Southern), Bock Water Heaters (Bock), and EEI all stated that DOE needs to revise the test procedure to account for the actual performance of gas-fired instantaneous water heaters. (Southern, No. 50 at p. 2; Bock, No. 53 at p. 3; EEI, No. 40 at p. 5)

DOE acknowledges that the actual hot water use and the number of daily draws seen in the field can vary greatly depending upon occupancy and consumer usage patterns for each type of water heater. DOE's test procedure attempts to normalize the usage across fuel types by specifying a typical draw pattern and total hot water usage. DOE accounts for the variability of these parameters on the energy consumption of the water heater using: (1) A hot water draw model that accounts for field conditions in a representative sample of U.S. homes; and (2) data from field studies of gas-fired instantaneous water heaters that incorporate a distribution of correction factors to account for actual field operation. These adjustments are used to estimate the impacts on consumers of amended standards in the LCC and PBP analysis.

In the past, the issue of whether the efficiency levels examined by DOE in this NOPR are achievable using the current DOE test procedures for residential water heaters has received much attention from commenters. In particular, several manufacturers either through manufacturer interviews or docket submissions have expressed their concern that as efficiencies increase and approach the theoretical maximum efficiency for electric resistance water heating (*i.e.,* 1.0 EF), the ability to consistently and repeatedly achieve those efficiencies is significantly hindered by the variations and inaccuracies that are inherent in the current DOE test procedure. During engineering and manufacturer interviews, manufacturers have indicated that this becomes an increasingly important issue at 0.95 EF.

Rheem Manufacturing Company (Rheem) commented that the nature of the DOE test procedure, including test set-up variations, instrumentation, and measurement inaccuracies, limits the attainable energy factor values. Rheem

[2] ''EEI, No. 40 at p. 5'' refers to: (1) To a statement that was submitted by the Edison Electric Institute. It was recorded in the Resource Room of the Building Technologies Program in the docket under ''Energy Conservation Program: Energy Conservation Standards for Residential Water Heaters, Direct Heating Equipment, and Pool Heaters,'' Docket Number EERE–2006–BT–STD–0129, as comment number 40; and (2) a passage that appears on page 5 of that statement.

stated that DOE should reevaluate the current test procedure to determine whether it can accurately measure the EF levels being proposed for standards, especially if a standard is set at or near the theoretically maximum-attainable EF. (Rheem, No. 49 at pp. 3–4)

DOE agrees with Rheem's assertion that as the theoretical limit is reached for a covered product utilizing a given technology (*e.g.,* electric resistance storage water heaters), the limitations imposed by the instrumentation, test set-up, and measurement accuracies become increasingly important. In response, DOE notes that there are currently several models in AHRI's Directory of certified residential water heaters that are listed with energy factors of 0.95 EF over a range of storage volumes. DOE believes this fact demonstrates that it is possible for manufacturers to make products that can repeatedly achieve an energy factor of 0.95 and can be certified at this efficiency level. In order to further verify the ability of manufacturers to achieve this efficiency level, DOE performed its own research, which consisted of independent third-party testing of several water heater models rated at 0.95 EF with rated storage volumes spanning 30 to 80 gallons. Of the five models tested that were rated at 0.95 EF, four fell within the acceptable range of values to be rated and certified at 0.95 EF, while only one model failed to achieve an efficiency that would be acceptable for a 0.95 EF rating. This further demonstrates the ability of manufacturers to consistently achieve 0.95 EF, as the large majority of the sample of models tested did reach an acceptable value for certification at 0.95 EF.

DOE has tentatively concluded that the TSLs being considering in the proposed rule provide ample room for manufacturers to innovatively design products which meet the standards using the existing test procedure. DOE's test results further provide evidence that electric storage water heaters exist at TSL 4 (0.95 EF at the representative rated storage capacity) across a range of storage volumes in the market today. In addition, DOE notes that once the product surpasses the theoretical maximum of a given technology by utilizing a different design these problems are mitigated. Consequently, DOE does not believe commenter's concerns regarding the repeatability and accuracy of the test procedure apply to TSL 6 and 7, where DOE is considering advance technology water heaters, including heat pump water heaters.

The Natural Resources Defense Council (NRDC) stated that the water heater test procedure fails to capture all of the cost-effective efficiency measures; the American Council for an Energy-Efficient Economy (ACEEE) and NRDC both stated that due to test procedure flaws (*e.g.,* giving no efficiency advantage for an insulated tank bottom), manufacturers are generally not willing to incorporate enhanced efficiency features because product costs are likely to rise without improving the rated energy efficiency. (NRDC, No. 48 at p. 3; ACEEE, No. 35 at p. 4) DOE acknowledges that the current test procedure may not reflect recent advances in technology. DOE believes, however, that the test procedure provides satisfactory methods for measuring performance of the efficiency levels considered in this rulemaking. Furthermore, the design paths that can be used to achieve the considered efficiency levels are given appropriate credit by the test procedure. DOE believes that the appropriate time to address the concerns raised is during the next revision of DOE's test procedure.

2. Direct Heating Equipment

The energy conservation standards set by EPCA for DHE are consistent with the energy efficiency metric described in the vented home heating equipment test procedure. On May 12, 1997, DOE published a final test procedure rule (the May 1997 final rule) in the **Federal Register** that amended the test procedures for DHE, particularly for vented home heating equipment. 62 FR 26140. In this rulemaking, DOE proposes that this test procedure be applied to establish the efficiency of vented gas hearth DHE.

3. Standby Mode and Off Mode Energy Consumption

EPCA, as amended by EISA 2007 requires DOE to amend the test procedures for the three types of heating products to include the standby mode and off mode energy consumption measurements. (42 U.S.C. 6295(gg)(2)(B)(v)) Consistent with EISA 2007's statutory deadline for these changes, DOE intends to amend its test procedures to incorporate these measurements by March 31, 2010. DOE is handling standby mode and off mode energy use for the three heating products in a separate rulemaking.

B. Technological Feasibility

1. General

In each energy conservation standards rulemaking, DOE conducts a screening analysis, which it bases on information it has gathered on all current technology options and prototype designs that could improve the efficiency of the products or equipment that are the subject of the rulemaking. As the first step in such analysis, DOE develops a list of design options for consideration in consultation with manufacturers, design engineers, and other interested parties. DOE then determines which of these means for improving efficiency are technologically feasible. DOE considers a design option to be technologically feasible if it is in use by the relevant industry or if research has progressed to the development of a working prototype. ''Technologies incorporated in commercial products or in working prototypes will be considered technologically feasible.'' 10 CFR 430, subpart C, appendix A, section 4(a)(4)(i).

Once DOE has determined that particular design options are technologically feasible, it evaluates each design option in light of the following additional screening criteria: (1) Practicability to manufacture, install, or service; (2) adverse impacts on product utility or availability; and (3) adverse impacts on health or safety. Section IV.B of this notice discusses the results of the screening analysis for the three types of heating products, particularly the designs DOE considered, those it screened out, and those that are the basis for the efficiency levels in this rulemaking. For further details on the screening analysis for this rulemaking, see chapter 4 of the NOPR TSD.

2. Maximum Technologically Feasible Levels

When DOE proposes to adopt (or not adopt) an amended or new energy conservation standard for a type or class of covered product, it must ''determine the maximum improvement in energy efficiency or maximum reduction in energy use that is technologically feasible'' for such product. (42 U.S.C. 6295(p)(1)) Accordingly, DOE determined the maximum technologically feasible (''max-tech'') efficiency levels for the three heating products in the engineering analysis using the most efficient design parameters that lead to the creation of the highest product efficiencies possible. (See chapter 5 of the NOPR TSD.)

The max-tech efficiency levels are set forth in TSL 7 for residential water heaters, TSL 6 for DHE, and TSL 6 for pool heaters. For the representative rated storage volumes and input capacity ratings within a given product class, products with these efficiency levels were or are now being offered for sale, or there is a prototype that has

been tested and developed. No products at higher efficiency levels are currently available. Table III.1 lists the max-tech efficiency levels that DOE determined for this rulemaking.

TABLE III.1—MAX-TECH EFFICIENCY LEVELS FOR THE RESIDENTIAL HEATING PRODUCTS RULEMAKING

Product class	Representative product	Max-tech efficiency level
Residential water heaters		
Gas-Fired Storage Water Heater	Rated Storage Volume = 40 Gallons	EF = 0.80
Electric Storage Water Heater	Rated Storage Volume = 50 Gallons	EF = 2.2
Oil-Fired Storage Water Heater	Rated Storage Volume = 32 Gallons	EF = 0.68
Gas-Fired Instantaneous Water Heater	Rated Storage Volume = 0 Gallons, Rated Input Capacity = 199,999 Btu/h.	EF = 0.95
Direct heating equipment		
Gas Wall Fan Type	Rated Input Capacity = Over 42,000 Btu/h	AFUE = 80%
Gas Wall Gravity Type	Rated Input Capacity = Over 27,000 Btu/h and up to 46,000 Btu/h.	AFUE = 72%
Gas Floor Type	Rated Input Capacity = Over 37,000 Btu/h	AFUE = 58%
Gas Room Type	Rated Input Capacity = Over 27,000 Btu/h and up to 46,000 Btu/h.	AFUE = 83%
Gas Hearth Type	Rated Input Capacity = Over 27,000 Btu/h and up to 46,000 Btu/h.	AFUE = 93%
Pool heaters		
Gas Fired	Rated Input Capacity = 250,000 Btu/h	Thermal Efficiency = 95%

See section IV.C.3 for additional details of the max-tech efficiency levels and discussion of related comments from interested parties on the preliminary analysis. In this NOPR, DOE again seeks public comment on the max-tech efficiency levels identified for its analyses. Specifically, DOE requests information about whether the efficiency levels identified by DOE would be achievable using the technologies screened-in during the screening analysis (see section IV.B), especially for gas-fired storage water heaters, and whether even higher efficiencies would be achievable using screened-in technologies. (See Issue 1 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

C. Energy Savings

1. Determination of Savings

DOE used its NIA spreadsheet to estimate energy savings expected to result from amended energy conservation standards for products that would be covered under today's proposed rule. (Section IV.F of this notice and chapter 10 of the NOPR TSD describe the NIA spreadsheet model.) For each TSL, DOE forecasted energy savings over the period of analysis (beginning in 2013 (DHE, pool heaters) or 2015 (water heaters), the year that compliance with the amended standards would be required, and ending 30 years later) relative to the base case. (The base case represents the forecast of energy consumption in the absence of amended energy conservation standards.) Stated another way, DOE quantified the energy savings attributable to potential amended energy conservation standards as the difference in energy consumption between the standards case and the base case.

The NIA spreadsheet model calculates the energy savings in site energy, which is the energy directly consumed on location by an individual product. DOE reports national energy savings on an annual basis in terms of the aggregated source (primary) energy savings, which are the energy savings used to generate and transmit the energy consumed at the site. To convert site energy to source energy, DOE derived conversion factors, which change with time, from the Energy Information Agency's (EIA) *Annual Energy Outlook 2009 (AEO2009).*

For results of DOE's National Energy Savings (NES) analysis, see section V.B.3 of this notice or chapter 10 of the NOPR TSD.

2. Significance of Savings

As noted above, under 42 U.S.C. 6295(o)(3)(B), DOE is prohibited from adopting a standard for a covered product if such standard would not result in ''significant'' energy savings. While the term ''significant'' is not defined in the Act, the U.S. Court of Appeals for the District of Columbia Circuit, in *Natural Resources Defense Council* v. *Herrington,* 768 F.2d 1355, 1373 (D.C. Cir. 1985), indicated that Congress intended ''significant'' energy savings in this context to be savings that were not ''genuinely trivial.'' The energy savings for all of the TSLs considered in this rulemaking are nontrivial, and, therefore, DOE considers them ''significant'' within the meaning of section 325 of the EPCA.

D. Economic Justification

1. Specific Criteria

As noted in section II.B., EPCA provides seven factors to be evaluated in determining whether a potential energy conservation standard is economically justified. (42 U.S.C. 6295(o)(2)(B)(i)) The following sections discuss how DOE has addressed each of those seven factors in this rulemaking.

a. Economic Impact on Manufacturers and Consumers

EPCA requires DOE to consider the economic impact on manufacturers and consumers of products when determining the economic justification of a standard. (42 U.S.C. 6295(o)(2)(B)(i)(I)) In determining the impacts of an amended standard on manufacturers, DOE first determines the quantitative impacts using an annual cash-flow approach. This includes both a short-term assessment—based on the cost and capital requirements during the period between the announcement of a regulation and when the regulation comes into effect—and a long-term

assessment over the 30-year analysis period. The impacts analyzed include INPV (which values the industry on the basis of expected future cash flows), annual cash flows, changes in revenue and income, and other measures of impact, as appropriate. DOE analyzes and reports the impacts on different types of manufacturers, paying particular attention to impacts on small manufacturers. DOE also considers the impact of standards on domestic manufacturer employment and manufacturing capacity, as well as the potential for plant closures and loss of capital investment. Finally, DOE accounts for cumulative impacts of different DOE regulations and other regulatory requirements on manufacturers.

For consumers, measures of economic impact include the changes in LCC and PBP for each TSL. The LCC, which is also separately specified as one of the seven factors to be considered in determining the economic justification for a new or amended standard (42 U.S.C. 6295(o)(2)(B)(i)(II)), is discussed in the following section.

For the results of DOE's analysis of the economic impacts of potential standards on manufacturers and consumers, see section V.B of this notice and chapters 8 and 12 of the NOPR TSD.

b. Life-Cycle Costs

The LCC is the sum of the purchase price of a product (including associated installation costs) and the operating expense (including energy, maintenance, and repair expenditures) discounted over the lifetime of the product. In this rulemaking, DOE calculated both LCC and LCC savings for various efficiency levels for each product. The LCC analysis estimated the LCC for representative heating products in housing units that represent the segment of the U.S. housing stock that uses these appliances. Through the use of a housing stock sample, DOE determined for each household in the sample the energy consumption of the heating product and the appropriate energy prices. By using a representative sample of households, the analysis captured the wide variability in energy consumption and energy prices associated with heating product use. For each household, DOE sampled the values of several inputs to the LCC calculation from probability distributions. For purposes of the analysis, DOE assumes that the consumer purchases the product in the year the standard becomes effective.

DOE presents the LCC savings as a distribution, with a mean value and a range across the sample for each product. This approach permits DOE to identify the percentage of consumers achieving LCC savings or attaining certain payback values due to an amended energy conservation standard, in addition to the average LCC savings or average payback for that standard.

For the results of DOE's LCC and PBP analyses, see section V.B.1.a of this notice and chapter 8 of the NOPR TSD.

c. Energy Savings

While significant conservation of energy is a separate statutory requirement for adopting an energy conservation standard, the Act requires DOE, in determining the economic justification of a standard, to consider the total projected energy savings that are expected to result directly from the standard. (42 U.S.C. 6295(o)(2)(B)(i)(III)) DOE used the NES spreadsheet results in its consideration of total projected savings.

For the results of DOE's energy savings analyses, see section V.B.3.a of this notice and chapter 10 of the NOPR TSD.

d. Lessening of Utility or Performance of Products

In establishing product classes and evaluating their potential for improved energy efficiency, DOE sought to develop potential standards for the three types of heating products that would not lessen the utility or performance of these products. During the screening analysis, DOE tentatively concluded that the efficiency levels being considered would not necessitate changes in product design that would reduce utility or performance of the three types of heating products that are the subject of this rulemaking. Therefore, none of the TSLs presented in today's NOPR would reduce the utility or performance of the products under consideration. (42 U.S.C. 6295(o)(2)(B)(i)(IV))

For the results of DOE's analyses related to the impact of potential standards on product utility and performance, see section IV.B of this notice and chapter 4 of the NOPR TSD, the screening analysis.

e. Impact of Any Lessening of Competition

EPCA directs DOE to consider any lessening of competition likely to result from standards. It directs the Attorney General to determine the impact, if any, of any lessening of competition likely to result from a proposed standard and to transmit such determination to the Secretary, not later than 60 days after the publication of a proposed rule, together with an analysis of the nature and extent of such impact. (42 U.S.C. 6295(o)(2)(B)(i)(V) and (B)(ii)) DOE has transmitted a copy of today's proposed rule to the Attorney General and has requested that the U.S. Department of Justice (DOJ) provide its determination on this issue. DOE will publish and address the Attorney General's determination in the final rule.

f. Need of the Nation To Conserve Energy

EPCA directs DOE to consider the need for national energy and water conservation as part of its standard-setting process. (42 U.S.C. 6295(o)(2)(B)(i)(VI)) DOE has preliminarily determined that the non-monetary benefits of the proposed standards would likely be reflected in improvements to the security and reliability of the Nation's energy system. Reductions in the demand for electricity may result in reduced costs for maintaining reliability of the Nation's electricity system. DOE conducts a utility impact analysis to estimate how standards may affect the Nation's power generation capacity requirements.

Energy savings from the proposed standards would also be likely to result in environmental benefits in the form of reduced emissions of air pollutants and greenhouse gases associated with energy production, and through reduced use of fossil fuels at the homes where heating products are used. Although presented in summary form in section IV.K, DOE reports the environmental effects from the proposed standards and all of the considered TSLs in the environmental assessment contained in chapter 15 of the NOPR TSD. DOE also reports estimates of the economic value of emissions reductions resulting from the considered TSLs.

g. Other Factors

The Act allows the Secretary of Energy, in determining whether a standard is economically justified, to consider any other factors that the Secretary deems to be relevant. (42 U.S.C. 6295(o)(2)(B)(i)(VII)) Under this provision, DOE considered LCC impacts on identifiable groups of consumers, such as seniors and residents of multi-family housing, who may be disproportionately affected by any national energy conservation standard level. In addition, DOE considered the uncertainties associated with the heat pump water heater market related to the ability of manufacturers to ramp up production of heat pump water heaters to serve the U.S. market, the ability of heat pump component manufacturers to increase production to serve the water

heater market, and the ability to retrain enough servicers and installers of water heaters to serve the market. See section V.C.1 for an additional discussion of the uncertainties in the heat pump water heater market.

For the results of DOE's LCC subgroup analysis, see section IV.G of this notice and chapter 11 of the NOPR TSD. For a full discussion of the uncertainties related to heat pump water heaters, see sections V.C.1 and IV.B.3 of this notice.

2. Rebuttable Presumption

As set forth in 42 U.S.C. 6295(o)(2)(B)(iii), EPCA provides for a rebuttable presumption that an energy conservation standard is economically justified if the additional cost to the consumer of a product that meets the standard level is less than three times the value of the first-year energy (and, as applicable, water) savings resulting from the standard, as calculated under the applicable DOE test procedure. The LCC and PBP analyses generate values that calculate the payback period for consumers of potential amended energy conservation standards. These analyses include, but are not limited to, the 3-year payback period contemplated under the rebuttable presumption test discussed above. However, DOE routinely conducts a full economic analysis that considers the full range of impacts, including those to the consumer, manufacturer, Nation, and environment, as required under 42 U.S.C. 6295(o)(2)(B)(i). The results of this analysis serve as the basis for DOE to definitively evaluate the economic justification for a potential standard level (thereby supporting or rebutting the results of any preliminary determination of economic justification). The rebuttable presumption payback calculation is discussed in section IV.D of this NOPR and chapter 8 of the NOPR TSD.

IV. Methodology and Discussion

In November 2006, DOE published a notice of public meeting and availability of the framework document. 71 FR 67825 (Nov. 24, 2006). DOE initially presented its proposed methodology for the analyses pertaining to the heating products rulemaking in the framework document. After receiving comments from interested parties on the approaches proposed in the framework document, DOE modified its methodology and assumptions, and performed a preliminary analysis for heating products. Subsequently, DOE published a notice of public meeting on January 13, 2009. 74 FR 1643. In the Executive Summary of that notice and preliminary TSD which accompanied it, DOE detailed its preliminary analysis conducted for the heating products rulemaking, including methodology, assumptions, and results. After receiving further comment from interested parties on the analytical approach and results of the preliminary analysis, DOE further refined its analyses for today's NOPR.

DOE used two spreadsheet tools to estimate the impact of today's proposed standards. The first spreadsheet calculates LCCs and PBPs of potential new energy conservation standards. The second provides shipments forecasts and then calculates national energy savings and net present value impacts of potential new energy conservation standards. DOE also assessed manufacturer impacts, largely through use of the Government Regulatory Impact Model (GRIM). These spreadsheets are available online at: *http://www1.eere.energy.gov/buildings/appliance_standards/residential/waterheaters.html.*

Additionally, DOE estimated the impacts on utilities and the environment of potential energy efficiency standards for the three heating products. DOE used a version of EIA's National Energy Modeling System (NEMS) for the utility and environmental analyses. The NEMS model simulates the energy sector of the U.S. economy. EIA uses NEMS to prepare its *AEO,* a widely-known energy forecast for the United States. The EIA approves the use of the name NEMS to describe only an *AEO* version of the model without any modification to code or data. For more information on NEMS, refer to *The National Energy Modeling System: An Overview 1998.* DOE/EIA–0581 (98) (Feb. 1998) (available at: *http://tonto.eia.doe.gov/FTPROOT/forecasting/058198.pdf*).

The version of NEMS used for appliance standards analysis is called NEMS–BT. Because the present analysis entails some minor code modifications and runs the model under various policy scenarios that deviate from *AEO* assumptions, the name ''NEMS–BT'' refers to the model as used here. (''BT'' stands for DOE's Building Technologies Program.) NEMS–BT offers a sophisticated picture of the effect of standards because it accounts for the interactions between the various energy supply and demand sectors and the economy as a whole.

A. Market and Technology Assessment

1. Consideration of Products for Inclusion in This Rulemaking

In this subsection, DOE is presenting its determination of scope and coverage for the rulemaking. Specifically, this subsection addresses whether EPCA covers certain products and provides DOE with the authority to adopt standards for those products. Second, it addresses certain types of heating products that are covered under EPCA, but for which DOE is not proposing amended standards at this time, due to other relevant statutory provisions, technological limitations, or other considerations.

a. Determination of Coverage Under the Act

i. Solar-Powered Water Heaters and Pool Heaters

As indicated above, EPCA directs DOE to determine whether to amend the energy conservation standards that the Act prescribes for residential water heaters and pool heaters. (42 U.S.C. 6295(e)(4)) Under EPCA, any standard for residential water heaters and pool heaters must establish either a maximum amount of energy use or a minimum level of efficiency that is based on energy use (42 U.S.C. 6291(5)–(6)). EPCA defines ''energy use,'' in part, as ''the quantity of energy'' that the product consumes. (42 U.S.C. 6291(4)) Further, EPCA covers these two products as consumer products. (42 U.S.C. 6291(2); 6292(a)(4), (9), and (11)) EPCA defines ''consumer product,'' in part, as an article that consumes or is designed to consume energy. (42 U.S.C. 6291(1)) EPCA defines ''energy'' as meaning ''electricity, or fossil fuels,'' or other fuels that DOE adds to the definition, by rule, upon determining ''that such inclusion is necessary or appropriate to carry out the purposes'' of EPCA. (42 U.S.C. 6291(3)) DOE does not have statutory authority to add solar energy (or any other type of fuel) to EPCA's definition of ''energy.'' Thus, DOE presently lacks authority to prescribe standards for these products when they use the sun's energy instead of fossil fuels or electricity because EPCA currently covers only water heaters and pool heaters that use electricity or fossil fuels, and because any ''energy conservation standard'' currently adopted under EPCA for these two products must address or be based on the quantity of these fuels, but not solar power, that the product consumes. As to water heaters, DOE lacks authority to adopt standards for solar-powered products for an additional reason. ''Water heater'' under EPCA currently means ''a product which utilizes oil, gas, or electricity to heat potable water,'' thereby excluding solar water heaters from coverage. (42 U.S.C. 6291(27); 10 CFR 430.2)

ii. Add-On Heat Pump Water Heaters

EPCA defines a residential ''water heater,'' in part, as a product that ''heat[s] potable water for use outside the heater upon demand, including * * * heat pump type units * * * which are products designed to transfer thermal energy from one temperature level to a higher temperature level for the purpose of heating water, including all ancillary equipment such as fans, storage tanks, pumps, or controls necessary for the device to perform its function.'' (42 U.S.C. 6291(27); 10 CFR 430.2) Integral heat pump water heaters are fully functioning water heaters when shipped by the manufacturer. They heat water for use outside the appliance upon demand and include in a single packaged product all of the components required for operation as a water heater. Therefore, integral units meet EPCA's definition of a ''water heater.''

Another product sold for residential use is commonly known as an add-on heat pump water heater. This product typically is marketed and used as an add-on component to a separately manufactured, fully functioning storage water heater (usually a conventional electric storage-type unit). The add-on unit consists of a small pump and a heat pump system. The pump circulates the refrigerant from the water heater storage tank through the heat pump system and back into the tank. The add-on heat pump extracts heat from the surrounding air and transfers it to the water in a process that is much more efficient than traditional electric resistance designs. The unit can be mounted on top of the storage tank, or can be separately placed on the floor or mounted on a wall. Add-on units cannot by themselves provide hot water on demand, but rather heat water only after being added to a storage-type water heater. Manufacturers do not ship the product as a fully-functioning water heating unit or paired with a storage tank. The add-on device, by itself, is not capable of heating water and lacks much of the equipment necessary to operate as a water heater. As such, it does not meet EPCA's definition of a ''water heater'' and currently is not a covered product. Consequently, DOE is not proposing in this rulemaking to adopt energy conservation standards for such add-on heat pump units.

iii. Gas-Fired Instantaneous Water Heaters With Inputs Above and Below the Levels Specified in Existing Definitions

Another element of EPCA's definition of a residential ''water heater'' is that it includes ''instantaneous type units which heat water but contain no more than one gallon of water per 4,000 Btu [British thermal units (Btu)] per hour of input, including gas instantaneous water heaters with an input of 200,000 Btu per hour or less * * *.'' (42 U.S.C. 6291(27)(B); 10 CFR 430.2) DOE's test procedure for residential water heaters implements and elaborates on this definition: ''*Gas Instantaneous Water Heater* means a water heater that * * * has an input greater than 50,000 Btu/hr (53 MJ/h) but less than 200,000 Btu/h (210 MJ/h) * * *.'' 10 CFR part 430, subpart B, appendix E, section 1.7.2. During the preliminary analysis and as today's NOPR was developed, DOE considered whether to evaluate for standards gas-fired instantaneous water heaters with inputs greater than 200,000 Btu/h and less than 50,000 Btu/h.

DOE's review of product literature from manufacturers of gas-fired instantaneous water heaters indicates that the majority of such products rated for residential, whole-house use has an input capacity of 199,000 Btu/h, and, thus, are covered by this rulemaking. Given the limitations set by Congress, residential gas-fired instantaneous water heaters with inputs greater than 200,000 Btu/h do not meet EPCA's definition of a ''water heater.'' Consequently, DOE is not proposing in this rulemaking to adopt energy conservation standards for such products.

Regarding the lower end of the range, DOE reviewed Air-Conditioning, Heating, and Refrigeration Institute's (AHRI) [3] *Consumers' Directory of Certified Efficiency Ratings for Heating and Water Heating Equipment* and manufacturer literature to determine the input capacities of products currently being offered for sale on the U.S. market. DOE found that the Directory contains only one gas-fired instantaneous water heater with an input capacity less than 50,000 Btu/h. Moreover, DOE determined that this product has been discontinued and is being replaced by a comparable product that has an input capacity greater than 50,000 Btu/h. Therefore, DOE is not proposing standards for products with an input capacity below 50,000 Btu/h.

[3] The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) is the trade association that represents manufacturers of heating products. It was formed on January 1, 2008, by the merger of the Gas Appliance Manufacturers Association (GAMA), which formerly represented these manufacturers, and the Air-Conditioning and Refrigeration Institute. AHRI maintains a Consumers' Directory of Certified Product Performance for water heaters, direct heating equipment, and pool heaters which can be found on AHRI's Web site at *http://www.ahridirectory.org/ahridirectory/pages/home.aspx.*

iv. Input Capacity for Residential Pool Heaters and Coverage of Spa Heaters

Under EPCA, ''pool heater'' is defined as ''an appliance designed for heating nonpotable water contained at atmospheric pressure, including heating water in swimming pools, spas, hot tubs and similar applications.'' (42 U.S.C. 6291(25); 10 CFR 430.2) During a preliminary phase of this rulemaking, DOE considered excluding from consideration pool heaters with an input capacity greater than 1 million Btu/h, based on its understanding that manufacturers market such pool heaters as light industrial or commercial products. Subsequently, two manufacturers advised DOE that the industry defines residential pool heaters as having an input capacity of less than or equal to 400,000 Btu/h. These comments suggested that DOE should use this capacity limit in its definition of residential pool heaters and for determining the scope of coverage of this product under EPCA.

As indicated by its definition of ''pool heater,'' quoted above, EPCA places no capacity limit on the pool heaters it covers. (42 U.S.C. 6291(25)) Furthermore, EPCA covers pool heaters as a ''consumer product,'' (42 U.S.C. 6291(2), 6292(a)(11)) and defines ''consumer product,'' in part, as an article that ''to any significant extent, is distributed in commerce for personal use or consumption by individuals.'' (42 U.S.C. 6291(1)) These provisions establish that EPCA, and standards adopted under it, apply to any pool heater distributed to any significant extent as a consumer product for residential use, regardless of input capacity; pool heaters marketed as commercial equipment, which contain additional design modifications related to safety requirements for installation in commercial buildings, are not covered by this standard. Therefore, DOE has tentatively concluded that an input capacity limit is neither necessary nor appropriate to determine the scope of coverage of this product under EPCA.

Regarding whether spa heaters, which heat the water in spas, are covered products, DOE notes that EPCA defines a ''pool heater'' to include appliances ''designed for * * * heating water in * * * spas.'' (42 U.S.C. 6291(25); 10 CFR 430.2) As the definition encompasses spa heaters, they are covered by EPCA as well as by the current standards for pool heaters, and DOE has included them in this rulemaking. Because spa heaters and pool heaters perform similar functions, include similar features, and lack performance or operating features that

would cause them to have inherently different energy efficiencies, DOE has not created a separate product class for such units.

v. Vented Hearth Products

As discussed in section II.C.2 above, before the enactment of NAECA, EPCA included ''home heating equipment'' in DOE's appliance standards program. EPCA did not define ''home heating equipment.'' NAECA's amendments to EPCA included replacing the term ''home heating equipment'' with ''direct heating equipment,'' and specified energy conservation standards for ''direct heating equipment.'' However, EPCA did not define this term, and subsequent legislation has not amended EPCA to provide a definition of ''direct heating equipment.''

DOE defined ''home heating equipment'' and related terms in its regulations. These definitions inform the meaning of ''direct heating equipment.'' 10 CFR 430.2. Specifically, DOE defines ''home heating equipment'' as meaning ''vented home heating equipment and unvented home heating equipment,'' and defines each of these two terms. *Id.* The definition of ''vented home heating equipment,'' relevant here, is as follows:

> * * * a class of home heating equipment, not including furnaces, designed to furnish warmed air to the living space of a residence, directly from the device, without duct connections (except that boots not to exceed 10 inches beyond the casing may be permitted) and includes: vented wall furnace, vented floor furnace, and vented room heater.'' *Id.*

DOE also defines the last three terms in this definition. *Id.* In order to provide additional clarity for interested parties, DOE is proposing to define the term ''direct heating equipment'' in today's rulemaking. Specifically, DOE is proposing to add the following definition in 10 CFR 430.2:

> Direct heating equipment means vented home heating equipment and unvented home heating equipment.

Given that background, the following addresses the issue of vented hearth products.

Vented hearth products include gas-fired products such as fireplaces, fireplace inserts, stoves, and log sets that typically include aesthetic features such as a yellow flame. Consumers typically purchase these products to add aesthetic qualities and ambiance to a room, and the products also provide space heating. They provide such heating by furnishing warmed air to the living space of a residence directly from the device without duct connections. There are two types of vented hearth product designs: (1) Recessed and (2) non-recessed. Recessed products are typically incorporated into or attached to a wall, whereas non-recessed products are typically free-standing and not attached to a wall. Both may include fireplace or hearth aesthetics, and the recessed product may include a surrounding mantle.

Vented hearth products meet DOE's definition of ''vented home heating equipment,'' because they are designed to furnish warmed air to the living space of a residence without duct connections. Furthermore, recessed and non-recessed vented hearth products are similar in design to some of the direct heating products for which EPCA prescribes standards, namely gas wall fan and gravity-type furnaces in the case of recessed products, and room heaters in the case of non-recessed products.

In sum, DOE has tentatively concluded that vented hearth products are covered products under EPCA, because they meet DOE's definition for ''vented home heating equipment'' and, therefore, are classified as DHE. Thus, DOE proposes to establish standards for these products in this rulemaking and subject these products to the existing testing and certification provisions for DHE. See section IV.2 and IV.3, below, for additional discussion on DOE's proposal for establishing coverage of hearth products and the product classes for the rulemaking analyses. If DOE finalizes this rulemaking as proposed for hearth type DHE, manufacturers of these products would be subject to the provisions in 10 CFR parts 430.23, 430.24, 430.27, 430.32, 430.33, 430.40 through 430.49, 430.50 through 430.57, 430.60 through 430.65, and 430.70 through 430.75, which currently apply to DHE. DOE seeks comment on the potential burdens to manufacturers of hearth-type DHE as a result of the testing, certification, reporting, and enforcement provisions in these sections. (See Issue 2 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

b. Covered Products Not Included in This Rulemaking

i. Unvented Direct Heating Equipment (Including Electric Equivalents to Gas-Fired Products)

When EPCA included ''home heating equipment'' as a covered product, DOE construed this term as including unvented as well as vented products, and prescribed a separate test procedure for each one. 43 FR 20128 (May 10, 1978); 43 FR 20147 (May 10, 1978). Each of these test procedures has since been amended, and they are codified in 10 CFR part 430, subpart B, appendices G and O, respectively. The new energy conservation standards for this equipment in NAECA's amendments to EPCA in 1987 were only for gas products, however, and used the AFUE descriptor, which applies to vented but not unvented equipment. (42 U.S.C. 6295(e)(3)) The AFUE descriptor is generally a measure of the amount of heat provided by the product compared to the amount of fuel supplied. Subsequent DOE actions concerning DHE—first in a NOPR proposing standards for eight separate products, 59 FR 10464 (March 4, 1994), and then in a final rule adopting test procedure amendments for DHE, 62 FR 26140 (May 12, 1997)—have focused solely on vented products. This approach reflects DOE's understanding that because unvented heating products dissipate any heat losses directly into the conditioned space rather than elsewhere through a vent, the amount of energy losses from these products is minimal.

The current test procedure for unvented equipment includes neither a method for measuring energy efficiency nor a descriptor for representing the efficiency of unvented home heating equipment. Instead, the current test procedure focuses on a method to measure and calculate the annual energy consumption of unvented equipment.10 CFR part 430, subpart B, appendix G. Nevertheless, it remains the case that the unvented products in question would dissipate any heat losses directly into the conditioned space, thereby resulting in minimal overall energy losses. Thus, DOE sees little benefit from setting a minimum efficiency level for these products and believes that it would be unnecessary to do so, given the extremely limited energy savings that could be achieved by such a standard. For these reasons, and consistent with previous rulemakings in which it has addressed DHE, DOE has not evaluated unvented products in this rulemaking and is not proposing standards for them at this time.

ii. Electric Pool Heaters

EPCA's definition of ''pool heater,'' quoted above, is not limited to appliances that use a particular type or types of fuel. (42 U.S.C. 6291(25); 10 CFR 430.2) Thus, EPCA covers both gas-fired pool heaters and electric pool heaters, including heat pump pool heaters. EPCA also specifies that the energy efficiency descriptor for residential pool heaters is thermal efficiency. (42 U.S.C. 6291(22)(E)). Lastly, EPCA defines the term ''thermal

efficiency of pool heaters'' as ''a measure of the heat in the water delivered at the heater outlet divided by the heat input of the pool heater as measured under test conditions specified in section 2.8.1 of the American National Standard for Gas Fired Pool Heaters, Z21.56–1986, or as may be prescribed by the Secretary.'' (42 U.S.C. 6291(26))

Currently, DOE's test procedures specify only a method for testing gas-fired pool heaters (10 CFR part 430, subpart B, appendix P), and the current energy conservation standard for pool heaters is a minimum level of thermal efficiency that applies only to gas-fired products. In order for DOE to consider an energy conservation standard for electric pool heaters, DOE would first need to establish a test procedure for electric pool heaters using the thermal efficiency metric required by EPCA. DOE seeks comments from interested parties on how DOE could address EPCA's efficiency descriptor requirements in a future potential test procedure revision for electric pool heaters. For this reason, DOE is proposing amended standards for gas-fired pool heaters only and is not considering standards for electric pool heaters. This is identified as Issue 3 in Section VII.E, ''Issues on Which DOE Seeks Comment.''

iii. Tabletop and Electric Instantaneous Water Heaters

Standards are currently applicable to tabletop and electric instantaneous water heaters. (10 CFR 430.32(d)) These products meet EPCA's definition of ''water heater'' (42 U.S.C. 6291(27); 10 CFR 430.2) and are covered by the Act because they utilize electricity to heat potable water for use outside the heater upon demand. However, for the reasons explained below, DOE has not analyzed tabletop water heaters and electric instantaneous water heaters in this rulemaking, and is not proposing amended standards for them, because of the limited potential for energy savings from higher standards for these products.

Tabletop products are primarily electric and are relatively small units because they are designed to be located underneath tabletops in highly specialized applications. The only means of which DOE is aware for manufacturers to increase the energy efficiency of tabletop units is to increase the thickness of their insulation, which would make them larger. Manufacturers already maximize the size of these water heaters in order to meet the currently required minimum energy factors, and size restrictions do not allow the units to be any larger. Thus, DOE is unaware of any means to make tabletop water heaters more energy efficient. Put another way, if DOE were to adopt a higher efficiency standard for this product, it would force this class of covered product off the market, in violation of 42 U.S.C. 6295(o)(4). For these reasons, DOE has not evaluated tabletop products in this rulemaking and is not proposing standards for them.

Regarding electric instantaneous water heaters, DOE notes that the energy efficiency metric for electric instantaneous water heaters (and all other water heaters) is a combination of recovery efficiency and standby losses. All electric water heaters, including instantaneous products, have minor losses in recovery efficiency. Moreover, electric instantaneous water heaters have negligible standby losses because they store no more than two gallons of hot water. In addition, many of the electric instantaneous products currently on the market perform well above the existing applicable energy conservation standard and use available technologies to produce negligible standby losses. Therefore, DOE has not evaluated electric instantaneous water heaters in this rulemaking and is not proposing standards for them.

iv. Combination Water Heating/Space Heating Products

EPCA authorizes DOE to set more than one standard for any product that performs more than one major function by setting one energy conservation standard for each major function. (42 U.S.C. 6295(o)(5)) Some products on the market provide both water heating and space heating. To the extent such combination products meet EPCA's criteria for coverage, DOE could set standards for them, including a separate standard for each of those functions. *Id.* However, because DOE's current test procedure cannot handle combination appliances and DOE has not yet adopted a test procedure to determine the energy efficiency of these combination appliances, DOE has not evaluated them in this rulemaking and is not proposing standards for them.

2. Definition of Gas Hearth Direct Heating Equipment

In the preliminary analysis, DOE stated that vented hearth products can be used to provide residential space heating. When used to furnish heat to a living space, DOE reasoned that these products provide the same function and utility as vented heaters. DOE stated in the preliminary analysis that hearth heaters also provide the same utility and function as gas wall furnaces or gas room heaters, and do not use any unique technologies. See chapter 2 of the preliminary TSD. Additionally, AHRI's Consumers' Directory categorizes fireplace heaters as either room heaters or wall furnaces. DOE treated gas hearth DHE as either a room heater or a wall furnace for the purposes of the preliminary analysis and requested comment in the Executive Summary to the preliminary TSD on the need for a separate product definition and class for gas hearth DHE.

AHRI stated that gas-fired hearth heaters need a unique definition but that they can be included within the room heater DHE product class. AHRI further stated that DOE should use the safety standard in the American National Standards Institute (ANSI) Standard Z.21–88, *Vented Fireplace Heaters* as a reference for developing a fireplace heater definition. (AHRI, Public Meeting Transcript, No. 34.4 at p. 36)

DOE agrees with AHRI and has decided to establish a separate definition for ''hearth direct heating equipment'' to allow manufacturers to easily determine coverage under DOE's regulations. DOE has determined that hearth DHE should not be included with room heater DHE (the alternative suggested by AHRI) due to the unique constraints on hearth products that are not applicable to room heaters because of the former's aesthetic appeal to consumers (*e.g.,* glass viewing panes, yellow flames, and ceramic log sets). DOE reviewed the ''vented gas fireplace heater'' definition in ANSI Standard Z.21–88, as suggested by AHRI. The ''vented gas fireplace heater'' definition in ANSI Standard Z.21–88 reads as follows:

> *Vented gas fireplace heater* is a vented appliance which simulates a solid fuel fireplace and furnishes warm air, with our without duct connections, to the space in which it is installed. A vented gas fireplace heater is such that it may be controlled by an automatic thermostat. The circulation of heating room air may be by gravity or mechanical means. A vented gas fireplace heater may be freestanding, recessed, zero clearance, or a gas fireplace insert.

Part of the ''vented gas fireplace heater'' definition specified by ANSI Standard Z.21–88 would conflict with DOE's definition of ''home heating equipment.'' 10 CFR 430.2. Specifically, all types of home heating equipment under DOE's regulations must function without duct connections (although boots not to exceed 10 inches beyond the casing may be permitted). Therefore, DOE is modifying the definition of

''vented gas fireplace heater'' in ANSI Standard Z.21–88 to be consistent with the types of equipment covered under DOE's authority for home heating equipment. Consequently, in order to account for hearth DHE, DOE is proposing a definition of ''vented hearth heater'' in section 430.2 to read as follows:

Vented hearth heater means a vented, freestanding, recessed, zero clearance fireplace heater, a gas fireplace insert or a gas-stove, which simulates a solid fuel fireplace and is designed to furnish warm air, without ducts to the space in which it is installed.

DOE seeks comment on its definition for ''vented hearth heater.'' (See Issue 4 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

3. Product Classes

In evaluating and establishing energy conservation standards, DOE generally divides covered products into classes by the type of energy used or by capacity or other performance-related feature that justifies a different standard for products having such feature. (See 42 U.S.C. 6295(q)) In deciding whether a feature justifies a different standard, DOE must consider factors such as the utility of the feature to users. *Id.* DOE normally establishes different energy conservation standards for different product classes based on these criteria.

Table IV.1 presents the product classes for the three types of heating products under consideration in this rulemaking. The subsections below provide additional details, discussion of comments relating to the product classes for the three heating products, as well as identified issues on which DOE is seeking comments.

TABLE IV.1—PROPOSED PRODUCT CLASSES FOR THE THREE HEATING PRODUCTS

Residential water heater type	Characteristics
Gas-Fired Storage Type	Nominal input of 75,000 Btu/h or less; rated storage volume from 20 to 100 gallons.
Oil-Fired Storage Type	Nominal input of 105,000 Btu/h or less; rated storage volume of 50 gallons or less.
Electric Storage Type	Nominal input of 12 kW (40,956 Btu/h) or less; rated storage volume from 20 to 120 gallons.
Gas-Fired Instantaneous	Nominal input of over 50,000 Btu/h up to 200,000 Btu/h; rated storage volume of 2 gallons or less.
Direct heating equipment type	**Heating capacity (Btu/h)**
Gas Wall Fan Type	Up to 42,000. Over 42,000.
Gas Wall Gravity Type	Up to 27,000. Over 27,000 and up to 46,000. Over 46,000.
Gas Floor	Up to 37,000 Over 37,000.
Gas Room	Up to 20,000. Over 20,000 and up to 27,000. Over 27,000 and up to 46,000. Over 46,000.
Gas Hearth	Up to 20,000. Over 20,000 and up to 27,000. Over 27,000 and up to 46,000. Over 46,000.
Pool heater type	**Characteristics**
Residential Pool Heaters	Gas-fired.

a. Water Heaters

Residential water heaters can be divided into various product classes categorized by physical characteristics that affect product efficiency. Key characteristics affecting the energy efficiency of the residential water heater are the type of energy used and the volume of the storage tank.

The existing Federal energy conservation standards for residential water heaters correspond to the efficiency levels promulgated by the January 2001 final rule, as shown in 10 CFR 430.32(d). These product classes are differentiated by the type of energy used (*i.e.,* electric, gas, or oil) and the type of storage for the water heater (*i.e.,* storage, tabletop, or instantaneous). In this rulemaking, DOE has excluded tabletop water heaters and electric instantaneous water heaters from consideration for the reasons discussed above. Table IV.2 shows the four product classes presented in the preliminary analysis for consideration in today's rulemaking.

TABLE IV.2—PRODUCT CLASSES FOR RESIDENTIAL WATER HEATERS DESCRIBED IN THE PRELIMINARY ANALYSIS *

Residential water heater type	Characteristics
Gas-Fired Storage Type	Nominal input of 75,000 Btu/h or less; rated storage volume from 20 to 100 gallons.
Oil-Fired Storage Type	Nominal input of 105,000 Btu/h or less; rated storage volume of 50 gallons or less.

TABLE IV.2—PRODUCT CLASSES FOR RESIDENTIAL WATER HEATERS DESCRIBED IN THE PRELIMINARY ANALYSIS *—Continued

Residential water heater type	Characteristics
Electric Storage Type	Nominal input of 12 kW (40,956 Btu/h) or less; rated storage volume from 20 to 120 gallons.
Gas-Fired Instantaneous	Nominal input of over 50,000 Btu/h up to 200,000 Btu/h; rated storage volume of 2 gallons or less.

* Only the product classes covered by this rulemaking are shown. The table does not include tabletop and instantaneous electric water heaters.

In response to the preliminary analysis, DOE received several comments from interested parties about DOE's potential product classes and their organization. These comments are summarized and addressed immediately below.

i. Gas-Fired and Electric Instantaneous Water Heaters

EEI suggested that DOE should revisit the parameters for the input capacity range for gas-fired and electric instantaneous water heaters. Specifically, EEI stated that some gas-fired instantaneous water heaters on the market have an input capacity higher than 200,000 Btu/h, and some electric instantaneous water heaters have an input capacity much higher than 12 kW. (EEI, No. 40 at p. 2) Northwest Energy Efficiency Alliance (NEEA) and Northwest Power and Conservation Council (NPCC) recommended combining gas-fired storage and gas-fired instantaneous water heaters into one product class, because this would simplify the rulemaking, and the commenters do not believe manufacturers will reduce the efficiency of the products they offer now (most of which have EF ratings above 0.80) in response. (NEEA and NPCC, No. 42 at p. 4) SEISCO commented that DOE should establish a separate product class and definition for ''electric instantaneous water heaters''. SEISCO recommended creating a definition for ''whole house electric instantaneous water heaters'' and amending the current 12 kilowatt (kW) maximum to a more reasonable 18 to 36 kW maximum to more accurately reflect the marketplace. (SEISCO, No. 41 at p. 1)

In response, DOE notes that EPCA's definition of ''water heater,'' establishes the input capacity limits for residential instantaneous water heaters. Specifically, the term ''water heater'' means ''a product which utilizes oil, gas, or electricity to heat potable water for use outside the heater upon demand, including * * * (B) instantaneous type units which heat water but contain no more than one gallon of water per 4,000 Btu per hour of input, including gas instantaneous water heaters with an input of 200,000 Btu per hour or less, oil instantaneous water heaters with an input of 210,000 Btu per hour or less, and electric instantaneous water heaters with an input of 12 kilowatts or less * * *'' (42 U.S.C. 6291(27)) As noted above, this statutory definition demonstrates that residential, gas-fired instantaneous water heaters with inputs greater than 200,000 Btu/h and residential, electric instantaneous water heaters with inputs greater than 12 kW do not meet the definitions of a ''water heater'' under EPCA. Accordingly, instantaneous water heaters outside the specified capacity range are not covered products under EPCA and are outside DOE's authority for standard setting pursuant to 42 U.S.C. 6295(e)(4). The input capacity ranges for gas-fired instantaneous water heaters and electric instantaneous water heaters are discussed further in sections IV.A.1.a and IV.A.1.b, respectively, of today's NOPR.

Additionally, DOE disagrees with the suggestion from NEEA and NPCC that DOE should combine the gas-fired storage and gas-fired instantaneous water heater product classes for this rulemaking. As noted earlier in this section, storage capacity is a key characteristic affecting the energy efficiency of water heaters, and it is within DOE's authority to divide products into classes based on capacity. (42 U.S.C. 6295(q)) Thus, DOE is maintaining separate product classes for gas-fired storage and gas-fired instantaneous water heaters for today's NOPR.

ii. Low-Boy Water Heaters

AHRI recommended establishing a separate product class for low-boy heaters since they must fit under a 36-inch counter, be less than 34 inches high, and have a jacket diameter of less than 26 inches. AHRI stated that low-boy heaters provide a specific utility to space-constrained residences and that these products cannot be made any larger. Low-boy heaters account for approximately 18 percent of the residential market. (AHRI, No. 43 at p. 3)

DOE does not agree that a separate product class needs to be established for low-boy water heaters. In evaluating and establishing energy conservation standards, DOE generally divides covered products into classes by the type of energy used, or by capacity or another performance-related feature that justifies a different standard. (See 42 U.S.C. 6295(q)) DOE notes that low-boy water heaters use the same type of energy (*i.e.,* gas or electricity) and are offered in a range of storage volumes. Thus, the type of energy used and the functionality of low-boy units are similar to other types of water heaters, and the size constraints of these units do not appear to impact energy efficiency, since many ''low-boy'' models have efficiencies that are comparable to standard-size water heaters currently available on the market.

DOE seeks comment on its product classes for water heaters. In particular, DOE is seeking further comment about the need for a separate product class for low-boy water heaters. (See Issue 5 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

iii. Ultra-Low NO_X Water Heaters

In the preliminary analysis, DOE did not distinguish ultra-low NO_X gas-fired storage water heaters from traditional gas-fired storage water heaters with standard burners. AHRI recommended establishing a separate product class. AHRI argued that these water heaters employ unique burners, designed to meet the ultra-low NO_X requirements (imposed by local air quality management districts to limit NO_X emissions of certain products), but which limit the manufacturer's options to increase efficiency. (AHRI, No. 43 at p. 2)

Rheem commented that instantaneous gas-fired water heater ultra-low NO_X requirements from local air quality management districts will commence in 2012 and that this product design

should be included in the analysis. (Rheem, No. 49 at p. 7)

DOE does not agree that a separate product class needs to be established for ultra-low NO_X gas-fired storage water heaters. As noted above, in evaluating and establishing energy conservation standards, DOE generally divides covered products into classes by the type of energy used, or by capacity or other performance-related feature that justifies a different standard for products having such feature. (See 42 U.S.C. 6295(q)) Ultra-low NO_X gas-fired storage water heaters use the same type of energy (*i.e.,* gas) and are offered in comparable storage volumes to traditional gas-fired storage water heaters using standard burners. In deciding whether the product incorporates a performance feature that justifies a different standard, DOE must consider factors such as the utility of the feature to users. *Id.* In terms of water heating, DOE believes ultra-low NO_X water heaters provide the same utility to the consumer. However, DOE also notes that ultra-low NO_X water heaters do incorporate a specific burner technology, allowing these units to meet the strict emissions requirements of local air quality management districts. Consequently, DOE developed an analysis on ultra-low NO_X gas-fired storage water heaters. See section IV.C.2 for additional details. DOE requests comment from interested parties regarding the approach to the analysis for ultra-low NO_X gas-fired storage water heaters. As indicated in section VII.E under Issue 6, DOE also seeks further comment about the need for a separate product class for ultra-low NO_X water heaters.

iv. Gas-Fired and Electric Storage Water Heaters Product Class Divisions

DOE received two comments about the product class divisions for gas-fired and electric storage water heaters. ACEEE stated that DOE should consider capacity-based product classes for gas-fired and electric storage water heaters. ACEEE stated that EPCA directs DOE to divide covered products into product classes by the type of energy used or by capacity or other performance-related features that affect efficiency. (42 U.S.C. 6295(q)) ACEEE also stated that DOE's energy efficiency equations demonstrate that capacity (*i.e.,* rated storage volume) is one determinant of efficiency. Accordingly, ACEEE recommended separating gas-fired and electric storage water heaters into two product classes, including ''very large'' and ''other.'' (ACEEE, No. 35 at p. 2) ACEEE expressed its belief that DOE will not adequately reflect the potential of the product classes without considering larger and smaller products as separate product classes. (ACEEE, Public Meeting Transcript, No. 34.4 at pp. 66–67)

ACEEE suggested that gas-fired storage water heaters with an input capacity greater than 65,000 Btu/h and electric storage water heaters with a rated storage volume greater than 75 gallons could be in the very large category. (ACEEE, No. 35 at p. 2) ACEEE commented that for heat pump water heaters, impacts such as air flow in small residences are much different for a 50-gallon model than a 30-gallon model. (ACEEE, Public Meeting Transcript, No. 34.4 at pp. 66–67)

In light of the above, ACEEE recommended that DOE should propose energy conservation standards for electric storage water heater products in the very large category requiring a minimum EF of 1.7, which would move the largest electric water heaters to utilize heat pump water heater technologies. ACEEE recommended that DOE should propose standards for the very large product class of gas-fired storage water heaters requiring a minimum EF of 0.77, which corresponds to the least-efficient condensing product. (ACEEE, No. 35 at p. 1)

Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric (SDGE), and Southern California Gas Company (SoCal Gas) filed a joint comment and urged DOE to subdivide gas-fired storage water heaters and electric storage water heaters into subclasses based on rated storage volume. (PG&E, SDGE, and SoCal Gas, No. 38 at p. 3)

DOE believes considering separate efficiency levels for different rated storage volumes could offer a way for DOE to capture additional potential energy savings. Instead of dividing gas-fired and electric storage water heaters into separate product classes by rated storage volume or input capacity as ACEEE suggested, however, DOE is using energy efficiency equations that vary with rated storage volume to describe the relationship between rated storage volume and energy factor. Historically, DOE has used the energy efficiency equations to account for the variability in performance resulting from tank size; these equations consider the increases in standby losses as tank volume increases. DOE is using the energy efficiency equations along with TSL pairings to consider different amended standards in the proposed rule. DOE further discusses the energy efficiency equations and the proposed modifications in section IV.C.7. DOE is requesting comment from interested parties on the energy efficiency equations developed for gas-fired and electric storage water heaters (See section IV.C.7 and Issue 7 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR for more information.) In addition, DOE further discusses the trial standard levels, which are comprised of various efficiency level pairings across the full range of rated storage volumes, in section V.A.

v. Heat Pump Water Heaters

In response to DOE's treatment of heat pump water heaters as a design option for electric storage water heaters in the preliminary analysis, DOE received several comments from interested parties. All of the commenters urged DOE to establish separate product classes for traditional electric resistance storage water heaters and heat pump water heaters. Their specific comments and DOE's response are presented below.

A.O. Smith stated DOE should separate the electric storage water heater product class into two products classes—one for electric resistance heaters and one for heat pump water heaters. A.O. Smith noted that DOE separated the two classes in the ENERGY STAR criteria. A.O. Smith further stated that since heat pump water heaters may not even fit in 30 percent of the installations that currently have resistance electric heaters, they cannot be considered to be a truly interchangeable technology. (A.O. Smith, No. 37 at p. 9)

AHRI agreed with some of the concerns DOE noted in the preliminary screening analysis for heat pump water heaters. Specifically, AHRI pointed to previous DOE studies, which found size-related installation issues with replacing an electric storage water heater with a heat pump water heater. To AHRI's knowledge, the heat pump water heater market has not changed significantly since DOE's 2001 water heater rulemaking, even with the recent initiation of the ENERGY STAR program and the enactment of legislation that provides a significant tax credit for the installation of these systems. With this in mind, AHRI recommended that DOE establish a separate product class for heat pump water heaters because its energy source is different than that of an electric water heater. While a heat pump water heater does use electricity to operate certain components, the actual energy source that heats the water is air. AHRI noted that an analogous situation exists for electric furnaces, which are

not subject to the same standards as heat pump systems. (AHRI, No. 43 at p. 4)

Rheem also maintains that heat pump water heaters require a separate product class. (Rheem, No. 49 at p. 5) Rheem commented that heat pump water heater designs require unique installations, air flow, space, condensate drain, service, and operational provisions that are considerably different from conventional electric storage water heaters. Rheem also stated that installation and air flow conditions will affect energy efficiency, and that heat pump water heaters cannot replace all electric storage type water heaters, as space and air flow constraints are quite common. Furthermore, Rheem commented that heat pump water heater technology depends largely on the operating environment; this represents a special performance-related consideration that warrants defining a separate product class for heat pump water heaters. (Rheem, No. 49 at p. 6) Rheem commented that the utility heat pump water heaters provide is not equivalent to other electric storage water heaters across the entire range of rated storage volumes. Rheem stated that the reduced delivery performance was recognized by ENERGY STAR, which requires a minimum first-hour rating of 50 gallons, instead of 67 gallons for common conventional technologies. The difference in utility will result in differing sizing guidelines to meet equivalent capacities. Rheem commented that while the primary fuel source for heat pump water heaters is assumed to be electricity, the technology attains an economic benefit by moving energy from one location to another. According to Rheem, it is conceivable that a heat pump water heater may operate and be designed with gas as a primary back-up fuel. Rheem noted that with energy factors exceeding 2.0, it can be argued that electricity is no longer the dominant fuel source. Rheem commented that these differences support the argument that heat pump water heaters are not simply an extension of conventional resistance-type electric storage water heaters. (Rheem, No. 49 at pp. 5–6)

While DOE acknowledges some of the challenges associated with heat pump water heaters, DOE does not agree that they require a separate product class. Specifically, DOE does not believe heat pump water heaters provide a different utility from traditional electric resistance water heaters. Heat pump water heaters provide hot water to a residence just as a traditional electric storage water heater. In addition, both heat pump water heaters and traditional electric resistance storage water heaters use electricity as the primary fuel source. DOE believes heat pump water heaters can replace traditional electric resistance storage water heaters in most residences, although the installation requirements may be quite costly. DOE further addresses heat pump water heaters in the screening analysis at section IV.B.3 and the installation requirements in section IV.E.2.a.

DOE seeks further comment on the need for a separate product class for heat pump water heaters. In particular, DOE is interested in receiving comments and data on whether a heat pump water heater can be used as a direct replacement for an electric resistance water heater, and the types and frequency of installations where a heat pump water heater cannot be used as a direct replacement for an electric resistance water heater. (See Issue 8 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

b. Direct Heating Equipment

DHE can be divided into various product classes categorized by physical characteristics and rated input capacity, both of which affect product efficiency and function. Key characteristics affecting the energy efficiency of DHE are the physical construction (*i.e.,* fan wall units contain circulation blowers), intended installation (*i.e.,* floor furnaces are installed with the majority of the unit outside of the conditioned space), and input capacity.

In the preliminary analysis, DOE examined the possibility of consolidating product classes for DHE. (See chapter 3 of the preliminary TSD.) NAECA originally established the Federal energy conservation standards, which are differentiated by input capacity range. Thus, to determine whether consolidation of existing product classes is appropriate, DOE examined the relationship between AFUE and input rating for DHE. The results of this inquiry are presented below.

i. Gas Wall Fan-Type Direct Heating Equipment

For fan-type wall furnaces, DOE surveyed AHRI's Consumers' Directory and available product literature. DOE identified available products ranging from 8,000 to 65,000 Btu/h. The market data demonstrate two separate trends for fan-type wall furnaces based on the efficiency range of the products. For higher-efficiency products (*i.e.,* 78 percent AFUE and higher), DOE noticed that efficiency decreases as capacity increases. For lower-efficiency products (*i.e.,* 73 to 77 percent AFUE), DOE noticed that efficiency increases as capacity increases. Therefore, because of the differing trends between capacity and efficiency, DOE proposes that the two product classes for gas wall fan-type DHE should remain.

ii. Gas Wall Gravity-Type Direct Heating Equipment

DOE examined the relationship between AFUE and input rating for gravity-type wall furnaces by reviewing AHRI's Consumers' Directory and available product literature. DOE identified products with input capacities ranging from 5,000 to 50,000 Btu/h. The Federal energy conservation standards for gas wall gravity-type furnaces divide these products into seven product classes based on input capacity ranges. The seven product classes are differentiated by one AFUE percentage point increase for each increase in input capacity range (*i.e.,* the larger the input capacity, the higher the AFUE requirements). The market data for gas wall gravity-type furnaces indicate that manufacturers are not offering products over the entire input capacity range. Therefore, some product classes may be unnecessary. DOE proposes that five product classes (up to 10,000 Btu/h, over 10,000 and up to 12,000 Btu/h, over 12,000 and up to 15,000 Btu/h, over 15,000 and up to 19,000 Btu/h, and over 19,000 and up to 27,000 Btu/h) be consolidated into a single product class labeled up to 27,000 Btu/h, leaving three product classes for gas wall gravity-type furnaces.

iii. Gas Floor-Type Direct Heating Equipment

DOE surveyed the current market for gas floor furnaces by reviewing AHRI's Consumers' Directory and available product literature. The AHRI directory lists 23 products. The Federal energy conservation standard includes two product classes divided by input ratings, one above and one at or below 37,000 Btu/h. According to the AHRI directory, more than 75 percent of products are rated above 37,000 Btu/h. When comparing the models with the highest AFUE rating between the two product classes in the preliminary analysis, however, DOE found that the energy savings potential increases as the input capacity range increases. This fact suggests that input capacity affects the AFUE of gas floor-type furnaces. Therefore, DOE proposes that the two product classes for gas floor-type DHE should remain.

iv. Gas Room-Type Direct Heating Equipment

DOE examined currently available room heaters by reviewing AHRI's Consumers' Directory and product literature. DOE found that room heaters have inputs ranging from 20,000 to 70,000 Btu/h. DOE also determined that the relationship between AFUE and input rating established by the Federal energy conservation standards is generally similar to the trend found among products listed in the AHRI directory. The market data show a general trend of increasing AFUE with input capacity range. DOE is proposing to consolidate the two lower input capacity ranges into a single product class (*i.e.,* input ratings up to 20,000 Btu/h), because there are no products in the AHRI directory under 20,000 Btu/h and all products at this input rating have the same efficiency. As a result, DOE is proposing only four product classes for gas room heaters.

Overall, DOE only received one comment in response to its product class consolidation for the existing DHE product types in the preliminary analysis. AHRI agreed that the number of product classes (*i.e.,* divisions by input capacity) for DHE product classes can be reduced. (AHRI, Public Meeting Transcript, No. 34.4 at p. 43)

Therefore, for the NOPR, DOE is proposing to reduce the number of product classes as suggested in the preliminary analysis and described above. DOE is seeking comments on the proposed product classes. (See Issue 9 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

v. Gas Hearth Direct Heating Equipment

DOE is proposing to add new product classes for gas hearth DHE, which are distinguished by input heating capacity. DOE modeled the product class divisions for gas hearth DHE after the proposed product class divisions for room heaters. DOE is seeking comments on the proposed product class divisions for gas hearth DHE. (See Issue 10 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

Table IV.3 presents the proposed product classes for DHE being considered for this rulemaking.

TABLE IV.3—PROPOSED PRODUCT CLASSES FOR DIRECT HEATING EQUIPMENT

Direct heating equipment type	Input heating capacity *Btu/h*
Gas Wall Fan Type	Up to 42,000.
	Over 42,000.
Gas Wall Gravity Type	Up to 27,000.
	Over 27,000 and up to 46,000.
	Over 46,000.
Gas Floor	Up to 37,000.
	Over 37,000.
Gas Room	Up to 20,000.
	Over 20,000 and up to 27,000.
	Over 27,000 and up to 46,000.
	Over 46,000.
Gas Hearth	Up to 20,000.
	Over 20,000 and up to 27,000.
	Over 27,000 and up to 46,000.
	Over 46,000.

c. Pool Heaters

As discussed above, the existing Federal energy conservation standards for pool heaters correspond to the efficiency levels specified by EPCA, as amended (42 U.S.C. 6295(e)(2)), and codified in 10 CFR 430.32(k), classifying residential pool heaters with one product class. This product class is distinguished by fuel input type (*i.e.,* gas-fired). DOE notes there are currently electric heat pump pool heaters on the market, which are not being considering in today's rulemaking, as discussed in section IV.A.1.b.

B. Screening Analysis

DOE uses the following four screening criteria to determine which technology options are suitable for further consideration in an energy conservation standards rulemaking:

1. *Technological feasibility.* DOE will consider technologies incorporated in commercial products or in working prototypes to be technologically feasible.

2. *Practicability to manufacture, install, and service.* If mass production and reliable installation and servicing of a technology in commercial products could be achieved on the scale necessary to serve the relevant market at the time the standard comes into effect, then DOE will consider that technology practicable to manufacture, install, and service.

3. *Adverse impacts on product utility or product availability.* If DOE determines a technology would have a significant adverse impact on the utility of the product to significant subgroups of consumers, or would result in the unavailability of any covered product type with performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as products generally available in the United States at the time, it will not consider this technology further.

4. *Adverse impacts on health or safety.* If DOE determines that a technology will have significant adverse impacts on health or safety, it will not consider this technology further.

10 CFR part 430, subpart C, appendix A, 4(a)(4) and 5(b).

In the preliminary analysis, DOE initially identified the technology options that could improve the efficiency of the three types of heating products that are the subject of this rulemaking. These technologies are listed in Table IV.4. See chapter 3 of the NOPR TSD for a detailed description of each technology option.

TABLE IV.4—TECHNOLOGIES DOE CONSIDERED FOR HEATING PRODUCTS

Water heaters	Direct heating equipment	Pool heaters
Heat Traps	Heat Exchanger Improvements	Electronic Ignition
Insulation Improvements	Electronic Ignition	Improved Heat Exchanger Design
Power Vent (Gas-Fired and Oil-Fired Only)	Thermal Vent Damper	More Effective Insulation (Combustion Chamber)
Heat Exchanger Improvements	Electrical Vent Damper	Power Venting
Flue Damper (Electromechanical)	Power Burner	Sealed Combustion
Side-Arm Heater	Induced Draft	Condensing Pulse Combustion
Electronic (or Interrupted) Ignition	Two Stage and Modulating Operation	Condensing
Heat Pump Water Heater (Electric Only)	Improved Fan or Blower Motor Efficiency	
CO_2 Heat Pump Water Heater	Increased Insulation (Floor Furnaces Only)	
Flue Damper (Buoyancy Operated)	Condensing	
Directly-Fired	Condensing Pulse Combustion	
Condensing	Air Circulation Fan	
Condensing Pulse Combustion	Sealed Combustion	
Thermophotovoltaic and Thermoelectric Generators		
Reduced Burner Size (Slow Recovery)		
Timer Control		
Two-Phase Thermosiphon (tpts)		
Modulating Controls		
Intelligent Controls		
Self-Cleaning		

In response to DOE's request for comments at the preliminary analysis stage of the rulemaking, DOE did not receive any comments suggesting additional technologies beyond those technology options presented in the preliminary analysis. Therefore, DOE considered the same technology options for the NOPR screening analysis.

1. Comments on the Screening Analysis

In the preliminary analysis, DOE excluded several of the technologies listed in Table IV.4 from consideration in this rulemaking based on one or more of the screening criteria described above. The technology options that were screened out, along with the reasons for their exclusion, are shown below in Table IV.5. For greater detail regarding each technology option, please see Chapters 3 and 4 of the TSD accompanying today's notice.

TABLE IV.5—SUMMARY OF SCREENED-OUT TECHNOLOGY OPTIONS

Applicable product types	Excluded technology option	Reasons for exclusion			
		Technological feasibility	Practicability to manufacture, install, and service	Adverse impacts on product utility	Adverse impacts on health of safety
Water Heaters	Side-Arm Heater	X	X		
	Advanced Insulation	X	X		
	Thermophotovoltaic and Thermoelectric Generators.	X	X		
	U-Tube Flue Design		X		
	CO_2 Heat Pump Water Heaters		X		
	Two-Phase Thermosiphons		X		
	Reduced Burner Size (Slow Recovery).			X	
	Directly Fired Water Heater				X
	Flue Damper (Buoyancy Operated).				X
	Condensing Pulse Combustion	X	X		
Direct Heating Equipment	Increased Heat Transfer Coefficient.		X		
	Power Burner		X		
	Improved Fan Blower Motors		X		
	Condensing Pulse Combustion	X	X		
Pool Heaters	Condensing Pulse Combustion	X	X		

In response to the screening analysis performed for the preliminary analysis, DOE received feedback from several interested parties.

a. General Comments

NRDC commented generally that screening technologies because they have not penetrated the market for the covered product is a flawed approach. NDRC stated that determining if a product is practical to manufacture does not require someone to already be manufacturing it. Instead, NRDC stated that when determining whether a product is practical to manufacture, DOE should consider identified technology options even if they are not

currently used in covered products. NRDC stated that DOE should gather data to determine whether technologies used in other products would be useful in the products in question. (NRDC, No. 48 at p. 3)

In response, as part of every rulemaking, DOE reviews the markets and technologies of the appliances under consideration using primary and secondary research. DOE considers prototype designs in the analysis that have not yet fully penetrated the market. In the case of a prototype design (or any design that has not penetrated the market at the time of the analysis) that is not being manufactured on a large scale, DOE examines the practicality of manufacturing, installing, and servicing the design, if it were required to be implemented on a larger scale by the anticipated compliance date of a standard, and accepts the product or screens it out of the analysis on that basis. DOE requires demonstration of a technology in at least a working prototype, because even though technologies may be proven for other applications, it may not translate to a different product type for a variety of reasons. NRDC did not point to specific examples of technologies DOE should consider, and hence, it is more difficult for DOE to specifically address the comment.

AHRI commented that DOE should recognize that many DHE products do not require electricity. AHRI stated that such designs allow consumers to use these products for emergency heat during power outages, which provides a real utility that needs to be factored into DOE's analysis. (AHRI, Public Meeting Transcript, No. 34.4 at p. 21)

DOE considers the impact of any lessening of utility from standards during the screening analysis. If DOE determines a technology would have significant adverse impact on the utility of the product to significant subgroups of consumers, or would result in the unavailability of any covered product type with performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as products generally available in the United States at the time, it will not consider this technology further. DOE considered several technology options for DHE that require electricity for the NOPR analyses, including electronic ignition systems and blowers or fans. Blowers and fans are generally not necessary for the products to operate and, because the equipment can be operated without them, do not impact the utility of being able to use the equipment for emergency heat during a power outage. For models with electronic ignition systems, electricity is required to light the burner, and, thus, required for product operation. In the case of a power failure, however, many products employ battery backup systems that can provide the electrical power needed to light the burner (or the pilot in the case of intermittent pilot ignitions) during the power outage. Because of this, an electronic ignition system with battery backup would not cause any lessening of utility as compared to a traditional standing pilot system for DHE. Therefore, DOE did not screen out these technologies.

b. Water Heaters

NEEA and NPCC stated that tank bottom insulation is an effective means of improving product efficiency. Accordingly, NEEA and NPCC urged DOE to consider this as a technology option for electric storage water heaters because field data from the Pacific Northwest suggest that tank bottom insulation decreases standby energy loss, especially when the tank is located on a concrete slab. (NEEA and NPCC, No. 42 at p. 4)

DOE considered various improvements in insulation for storage water heaters during the screening analysis, including tank bottom insulation. (See chapter 3 of the NOPR TSD for a full description of the insulation improvements DOE considered.) DOE notes that tank bottom insulation was not screened out during the screening analysis, which is in contrast to advanced forms of insulation which were screened out as unproven (*e.g.,* vacuum panels, aerogels). When listing the potential technology options at each efficiency level (see section IV.C.3), DOE shows only those technologies most commonly used in manufacturing, although specific implementation details vary by manufacturer. Manufacturers currently do not use increased tank bottom insulation as a primary means of increasing efficiency; therefore, it was not listed as one of the technologies used in achieving these efficiency levels for storage water heaters. Hence, DOE agrees with NEEA and NPCC that tank bottom insulation is an effective means of improving the energy factor of storage water heaters.

NEEA and NPCC also urged DOE to include as technology options heat pump water heaters that use CO_2 as the refrigerant. NEEA and NPCC commented that CO_2 heat pump water heaters have been sold and serviced by hundreds of thousands of manufacturers in Southeast Asia and elsewhere over the last 5 to 10 years. (NEEA and NPCC, No. 42 at pp. 4–5)

DOE is not considering CO_2-based heat pump water heaters because DOE research suggests U.S. manufacturers do not have the necessary infrastructure to support manufacturing, installation, and service of CO_2 heat pump water heaters on the scale necessary to serve the relevant market by the compliance date of an amended energy conservation standard. DOE also does not believe manufacturers would be able to develop the necessary infrastructure before the compliance date of an amended energy conservation standard because these products have not penetrated the U.S. market.

ACEEE commented that DOE should revisit the preliminary conclusions presented in the screening analysis, including the tentative decision to not further consider thermophotovoltaic and thermoelectric generators. (ACEEE, No. 35 at pp. 3–4) The commenter stated that the inclusion of thermophotovoltaic and thermoelectric generators would make other technologies such as side-arm themosiphons more feasible. ACEEE asserted that in the case of thermophotovoltaic and thermoelectric generators, DOE assumes that line voltage or 24-volt power cannot be required for gas-fired storage water heaters. DOE research suggests that the amount of power that can be generated by thermophotovoltaic and thermoelectric generators in a residential storage water application is quite limited. Commercially-available thermoelectric elements for water heaters typically produce less than 0.05 Watts of power, and so-called thermopiles can reach as high as 0.75 Watts. While it is theoretically possible to power devices other than the customary gas valves with thermoelectric power sources, DOE is unaware of an external device that has an impact on energy efficiency whose power demands are low enough to allow it to be powered by such generators. DOE is also unaware of any thermophotovoltaic power generators that have been developed to the point where they could be incorporated by the compliance date of the rulemaking, nor of any role that such generators would play in increasing the energy efficiency of gas-fired storage water heaters.

Rheem commented that DOE should recognize the special utility of self-powered water heaters. (Rheem, No. 49 at p. 4) DOE acknowledges that most gas-fired storage-water heaters on the market today do not require an electrical connection to operate (*i.e.,* they are self-powered). Typically, the gas valves on these units incorporate a thermoelectric

element that is impinged on by a standing pilot flame. The minute power generated by the thermoelectric element opens the gas supply in the valve assembly via a low-power solenoid. Thus, thermoelectric elements typically act as a safety device. They do not provide sufficient power to run fan blower motors and other high-powered devices. Therefore, DOE has tentatively decided to continue to exclude thermophotovoltaic and thermoelectric generators from its analysis, because they are not an effective means of improving the efficiency of water heaters.

ACEEE also stated that DOE should revisit the preliminary conclusions presented in the screening analysis regarding flue dampers since electromechanical dampers were common on furnaces and boilers and appear to be available for residential boilers today. (ACEEE, No. 35 at pp. 3–4) DOE research suggests that there are no residential storage water heaters on the market today that incorporate such dampers.

Although electromechanical dampers may be found on some furnaces, boilers, and commercial water heaters, their benefit in a residential water heater application is unknown because no manufacturer incorporates them in their products. All products that incorporate electromechanical dampers of which DOE is aware require line power to operate them. Thus, such dampers may not be practicable for all consumers. Additionally, DOE researched damper systems that do not require electrical power to operate. Typically, such systems are based on a bi-metal damper installed on top of the flue pipe outlet that opens when heated and closes as it cools. DOE research suggests that such non-electrically-actuated dampers pose potential health and safety problems. For example, such dampers can fail in the closed position, which could cause the exhaust gases to be stuck in the flue. Furthermore, they rely on hot air impingement to open. However, when the water heater begins its combustion cycle, the flue and its baffles are relatively cold, and flue gas temperatures may require some time until they reach the point where they will open a bi-metal damper quickly and completely. This is especially true for flammable vapor ignition resistant (FVIR) water heaters (which all residential water heaters are) whose natural draft is already restricted by FVIR components. With the flue shut or mostly shut on start-up, water heater combustion can be impacted in a number of ways, including nuisance lockouts, increased carbon monoxide production, and flue gases spilling into living spaces. For these reasons, non-electromechanical dampers were screened out.

ACEEE commented that DOE should revisit the preliminary conclusions presented in the screening analysis regarding advanced forms of insulation, which resulted in DOE's tentative decision to screen out those technologies. (ACEEE, No. 35 at pp. 3–4) In response, DOE research suggests that emerging technologies such as vacuum-insulated-panels (VIPs) may allow manufacturers to reduce heat loss, but such technologies have yet to find application in storage water heaters. DOE notes that ACEEE did not provide any new rationale or data to support why DOE should reconsider its original conclusion presented in the preliminary screening analysis that advanced forms of insulation have not been demonstrated as practical to manufacture and install. Hence, DOE screened out advanced forms of insulation from the NOPR analyses.

ACEEE also stated that DOE should revisit its preliminary conclusions regarding sidearm heaters and two-phase thermosiphons (TPTS) which resulted in DOE's tentative decision to screen out those technologies. (ACEEE, No. 35 at pp. 3–4) Regarding two-phase thermosiphons, ACEEE did not provide any explanation in its comment as to why DOE should reconsider its initial conclusion that it is not practicable to manufacture, install, and service this technology on the scale necessary to serve the relevant market at the time compliance with the standard is required. TPTSs require a drastic redesign of the water heater and are typically not practical for indoor installation. Therefore, DOE has continued to screen out this technology.

Regarding side-arm heaters, ACEEE commented that sidearm heaters are more feasible with access to 24-volt power, which would allow them to be located above or below the unit. This assertion does not address DOE's concerns about sidearm heaters presented in the preliminary analysis. DOE research did not reveal any working prototypes for gas-fired or oil-fired storage water heaters, and manufacturers seem to no longer use this technology. Therefore, this technology is not feasible and not practical to manufacture, install, and service side-arm storage water heaters on the scale necessary to serve the relevant market at the time of the compliance date of the standard, and was not considered further in the analysis. See chapter 4 of the NOPR TSD, Screening Analysis, for more details about DOE's assessment of two-phase thermosiphons and sidearm heaters.

For the reasons listed above, DOE still believes that thermophotovoltaic and thermoelectric generators, side-arm heaters, and advanced forms of insulation are not technologically feasible and are impractical to manufacture, repair, and install; that two-phase thermosiphons are impractical to manufacture, repair, and install; and that buoyancy operated flue dampers have an adverse impact on the safety of these products.

Bradford White Corporation (BWC) stated that using multiple flues for gas-fired storage water heaters is difficult, costly, and impractical to produce on residential water heater tank production lines. (BWC, No. 46 at p. 2)

In response, DOE research suggests that multi-flue storage water heaters can be produced at a higher production scale than is commonly done now. The current low shipment-volume techniques are commonly used in commercial gas-fired and oil-fired water heater designs. Solutions for higher-volume production of such heaters would require significant investments but are not technically infeasible. Thus, DOE believes multiple flue designs could be implemented on residential storage water heaters and are a viable technology for improving the efficiency of oil-fired storage water heaters.

In summary, none of the comments DOE received on the screening analysis led DOE to reconsider its determination for any of the technologies that were excluded from the preliminary analysis. Therefore, DOE excluded the same technologies in the NOPR analysis. Chapter 4 of the NOPR TSD provides more details about the technologies that DOE screened out.

2. Technologies Considered

Based upon the totality of the available information, DOE has tentatively concluded that: (1) All of the efficiency levels discussed in today's notice are technologically feasible; (2) products at these efficiency levels could be manufactured, installed, and serviced on a scale needed to serve the relevant markets; (3) these efficiency levels would not force manufacturers to use technologies that would adversely affect product utility or availability; and (4) these efficiency levels would not adversely affect consumer health or safety. Thus, the efficiency levels that DOE analyzed and is discussing in this notice are all achievable through technology options ''screened in'' during the screening analysis. The

technologies DOE considered are shown in Table IV.6 through Table IV.8.

TABLE IV.6—TECHNOLOGIES DOE CONSIDERED FOR THE WATER HEATER ENGINEERING ANALYSIS

Technology	Water heater type by Fuel Source			
	Storage			Instantaneous
	Gas-fired	Electric	Oil-fired	Gas-fired
Increased Jacket Insulation	X	X	X	
Foam Insulation			X	
Improve/Increased Heat Exchanger Surface Area	X	X	X	X
Enhanced Flue Baffle	X		X	
Direct-Vent (Concentric Venting)				X
Power Vent	X		X	X
Electronic (or Interrupted) Ignition	X		X	X
Heat Pump Water Heater		X		
Condensing	X		X	X

TABLE IV.7—TECHNOLOGIES DOE CONSIDERED FOR THE DIRECT HEATING EQUIPMENT ENGINEERING ANALYSIS

Technology
Increased Heat Exchanger Surface Area.
Direct-Vent (Concentric Venting).
Electronic Ignition.
Induced Draft.
Two Stage and Modulating Operation.
Condensing.

TABLE IV.8—TECHNOLOGIES DOE CONSIDERED FOR THE POOL HEATER ENGINEERING ANALYSIS

Technology
Increased Heat Exchanger Surface Area.
More Effective Insulation (Combustion Chamber).
Power Venting.
Sealed Combustion.
Condensing.

3. Heat Pump Water Heaters Discussion

For the preliminary analysis, DOE considered heat pump water heaters as a viable technology option for improving the efficiency of electric storage water heaters. DOE posted the preliminary TSD for residential heating products on its Web site on January 5, 2009 (for more information see *http://www1.eere.energy.gov/buildings/appliance_standards/residential/water_pool_heaters_prelim_tsd.html*). Pages 2–21 to 2–29 of chapter 2 of the preliminary TSD contain an extensive discussion of heat pump water heaters and the significant issues pertaining to the consideration of heat pump water heaters in this rulemaking. In the executive summary to the preliminary TSD, DOE sought comments on the viability of heat pump water heaters as a technology for electric storage water heaters and whether these water heaters would be practicable to manufacture, service, and install on a scale necessary to serve the relevant market by the compliance date of any amended standard, which would be five years after publication of the final rule.

In addition, DOE sought comment on several other issues regarding integral heat pump water heaters: (1) Whether manufacturers would be able to finance the investment costs necessary to convert their existing product lines to heat pump water heaters by the compliance date of an amended standard; (2) what percentage of manufacturers' product lines would be converted to heat pump water heaters by the compliance date of an amended standard (*e.g.,* if standards did not reach the levels provided by heat pump water heaters); (3) how the market for heat pump water heaters has changed since the January 2001 final rule, and the number of installations that would incur a significant increase in cost due to extensive modifications that will have to be made to a residence to accommodate a heat pump water heater; and (4) heat pump water heater programs that have been conducted since the January 2001 final rule.

In response to the preliminary analysis, DOE received a multitude of comments from interested parties, both at the public meeting and in written responses during the preliminary analysis comment period. A summary of the comments received and DOE's responses are presented below.

a. Consumer Utility

Southern stated that DOE needs to address issues regarding cold air produced by heat pump water heaters. According to Southern, simply increasing a residence's heat output is not an appropriate way to compensate for the cold air a heat pump water heater generates. Southern also asserted that constantly blowing cold air will create uneven temperatures within the dwelling space, leading to utility and comfort issues. (Southern, Public Meeting Transcript, No. 34.4 at p. 22) Southern noted that a heat pump water heater could provide supplemental cooling during a home's cooling hours; however, concentrated cooling at a particular location would result in uneven temperatures in a home, thereby being incompatible with the home's temperature needs. Southern stated that this would reduce the utility and performance of a home's HVAC system, and that there is no practical solution. (Southern, No. 50 at p. 2) The commenter stated that an HVAC supply vent near the unit would not help mitigating cold air issues. Southern commented that although a vent may cancel the effect of the cool air supplied in the winter (by supplying heat), during the cooling season, the supply vent (now supplying cool air) would exacerbate the temperature imbalance in the area of the heat pump water heater. (Southern, No. 50 at p. 2)

DOE agrees with Southern that cold air production of heat pump water heaters should be considered in the analysis. While DOE believes most consumers would choose to increase the use of their space heating system to deal with the increased heating load, DOE did account for the possibility that some consumers would choose to install ductwork to vent cold air away from the space surrounding the water heater to the outdoors to overcome uneven temperature problems. The increased installation costs of venting cold air away from a conditioned space, along with the increased cost of space heating for consumers who choose not to vent cold air away from the conditioned space, are accounted for in DOE's

analysis for certain percentages of consumers (see section IV.E.2).

Southern also commented on noise issues. Southern stated that is difficult to comment on a hypothetical product where no specifications exist, but that existing electric storage water heaters are often located in utility closets close to bedrooms and living areas. The commenter asserted that even if the product generates decibel levels similar to a refrigerator, such noise is a matter of greater concern because a heat pump water heater would tend to be in closer proximity to a bedroom or other quiet living area, as compared to a refrigerator located in a kitchen. Noise dampening would not be practical because louvered doors would be required to allow adequate air flow for the heat pump water heater. Southern cited the EPCA criteria, stating that there would be a significant impact on the utility or performance of the appliance if excessive noise disturbs the consumer. (Southern, No. 50 at p. 2)

DOE does not agree that the additional noise from a compressor used for a heat pump water heater would affect consumer utility for two reasons. First, as Southern points out, noise from a heat pump water heater compressor may be comparable in decibel level to the noise created by a refrigerator compressor, which has not been found to adversely affect consumer utility. Second, while the actual impact of excess noise created by a compressor may vary greatly based on the location of the appliance installation, DOE does not have any reason to believe that water heaters are any more likely to be installed near a bedroom than a refrigerator. Water heaters are typically not installed in consumers' bedrooms or living spaces, but instead are usually installed in garages, closets, basements, attics, or other locations away from the living space. Thus, DOE believes that noise created by a compressor would not significantly impact consumer utility.

b. Production, Installation, and Servicing Issues

DOE received numerous comments in response to the preliminary analysis on the practicality of manufacturing, installing, and servicing heat pump water heaters.

Southern stated that it is difficult to determine whether heat pump water heaters would be practical to install and service and if they are reliable, because at the time Southern submitted this comment, there were no products on the market to compare against. (DOE notes several heat pump water heaters have recently become available on the market). Also, no product exists yet that could be mass produced and available in 2015 in response to a heat pump water heater energy efficiency standard. (Southern, Public Meeting Transcript, No. 34.4 at pp. 58–59) Further, Southern commented that installation of heat pump water heaters in new construction is still problematic for multifamily housing, although the issues are less severe than in replacement installations. In multifamily housing, interior locations are preferred for mechanical systems, and perimeter locations (*e.g.,* windows and balconies) are preferred for exterior exposures. Southern stated that a heat pump water heater could be installed in an interior, but the addition of supply and return vents to the outdoors would be expensive. Southern also stated that placing the heat pump water heater at a perimeter location is possible, but would reduce the architectural options available for builders. (Southern, No. 50 at pp. 2–3) Finally, Southern commented that it is very concerned about the possible selection of an amended conservation standard at an efficiency level that would require heat pump water heaters. Southern strongly encourages the use of heat pump water heaters, but it argued that given operational differences, they are not suitable for some consumers due to the need for very expensive building modifications. (Southern, No. 50 at p. 1)

BWC noted that the owner or installer can return a water heater to the manufacturer if a defect is claimed. BWC stated that in these cases, units are tested and typically there is no actual defect. According to BWC, if heat pump water heaters are introduced on a larger scale, it is likely that more water heaters will be returned to the manufacturer without servicing because many traditional plumbers (who would install the heat pump water heaters) have no HVAC training and no refrigerant licenses. (BWC, No. 46 at p. 2) BWC stated that training and education costs associated with heat pump water heaters were overlooked in the previous rulemaking and have been overlooked in the current rulemaking as well. (BWC, No. 46 at p. 2)

GE stated that it will be producing a heat pump water heater sometime in the near future, and asserted that it is practical to manufacturer, install, and service heat pump water heaters. Further, GE added that it has the facilities to both manufacture and service these products. It is GE's opinion that there will be a great deal of consumer interest in such products, and that this market will increase and be much larger than the current market. (GE, Public Meeting Transcript, No. 34.4 at p. 63)

In its written submission, GE also commented on the practicality of installation and service. GE stated that its heat pump water heater occupies the exact footprint of a standard water heater and requires the same electrical and plumbing connections. (GE, No. 51 at p. 2) According to GE, the vast majority of installations would be simple and straightforward, and consumers would achieve significant energy savings and often may obtain collateral installation benefits such as dehumidified basements or cooler attics. (GE, No. 51 at p. 2) GE argued that heat pump water heaters installed in humid locations could eliminate the need for a separate dehumidifier, which could save consumers both capital and energy. (GE, No. 51 at p. 2) GE acknowledged that a heat pump water heater produces a small amount of condensate. However, GE commented that this would not require any building modifications, as condensate is easily drained to a floor drain that should accompany each water heater for leakage or overflow. (GE, No. 51 at p. 2) Alternatively, GE commented that for heat pump water heaters that are not installed near a floor drain, a small condensate pump (similar to those used for HVAC installations) can be installed to pump condensate to a suitable drain. (GE, No. 51 at p. 2) GE did state that heat pump water heater installation in confined spaces with very small areas and no ventilation may present challenges. (GE, No. 51 at p. 2)

Regarding the reliability issues surrounding heat pump water heaters, ACEEE stated that the historical record of failures for heat pump water heaters arises from the fact that initial models were brought to market by laboratory-based applied research and development companies and commercial niche companies, rather than the major consumer appliance companies that are currently announcing heat pump water heater products. ACEE stated that an analysis which ignores the nature of the manufacturer is bound to misrepresent the potential of the heat pump water heater. (ACEEE, Public Meeting Transcript, No. 34.4 at pp. 65–66) NEEA and NPCC acknowledged the failure issues discussed in the preliminary analyses, but they argued that the failures have been attributable to the control boards, which other markets have experienced. NEEA and NPCC stated that the control board failures are not characteristic of the heat pump water heaters, but of the electronics industry itself, and replacement is a

simple and inexpensive remedy. (NEEA and NPCC, No. 42 at p. 5)

In response to the comments provided by Southern, BWC, GE, ACEEE, NEEA, and NPCC, DOE believes that heat pump water heaters could potentially be installed and serviced on the scale necessary for the residential market before the potential compliance date of an amended energy conservation standard for water heaters. Although servicing heat pump water heaters will require significantly more training than servicing traditional electric storage water heater technologies, DOE notes that many domestic appliances are being installed and repaired today which feature compressors (*i.e.,* refrigerators, room air conditioners, and similar appliances). DOE believes that, given the 5-year delay between the issuance of the final rule and the compliance date and the fact that many manufacturers already have these products under development, it is unclear whether manufacturers would be able to retrain installers and service technicians to install and service heat pump water heater technology. DOE estimated the additional costs that would be incurred as a result of increased certification requirements to install and service heat pump water heaters in its analyses. See section IV.E.2 for details.

A.O. Smith asserted that heat pump water heaters are a viable technology to serve a portion of the water heater market, but that they are only practical for a small, niche part of the market and should never be considered when setting the ''efficiency floor'' of the electric water heater market. A.O. Smith argued that manufacturers could make the investment needed for the small volumes of heat pump water heaters that manufacturers believe are practical, but the cost of changing every line completely over to heat pump water heaters would be prohibitive. In addition, A.O. Smith stated that the percentage of heat pump water heaters to penetrate the market will be small and will be driven by market incentives such as tax credits and rebates. (A.O. Smith, No. 37 at p. 8) BWC stated that it could likely convert some of its product lines to heat pump water heaters by the compliance date of the standard. BWC also commented that without knowing the cost to retrofit current production lines and the cost of heat pump water heaters, it cannot comment on what percentage could be converted by the compliance date. (BWC, No. 46 at p. 1) Edison Electric Institute stated that heat pump water heaters are different from standard electric storage water heaters and cannot be considered for direct replacements due to technology, size, and other issues. EEI also stated its concern that industry would not be able to increase production from under 10,000 units per year to 4.5 million units per year by the compliance date of the standard. According to EEI, if DOE does not create a separate product class for heat pump water heaters, DOE should screen out this technology from this rulemaking. (EEI, No. 40 at p. 3)

DOE acknowledges there could be issues with converting entire production lines to manufacture heat pump water heaters before the compliance date of this standard. However, DOE also notes that significant portions of heat pump water heaters are expected to remain very similar in design to current standard electric storage water heaters. Manufacturers could choose to produce the heat pump portion of the water heater in-house or purchase it from a supplier. GE has already announced that a heat pump water heater will be available sometime this year, and other major manufacturers are also developing heat pump water heaters. Given the 5-year delay in compliance date from the issuance of the final rule, and the fact that many manufacturers are already developing heat pump water heaters, DOE believes manufacturers may be able to convert their entire product lines before the compliance date of an amended energy conservation standard. However, DOE also recognizes there would likely be significant impacts on manufacturers. DOE considers those impacts in the MIA section of this NOPR (section IV.H).

DOE is seeking comment on the manufacturability of heat pump water heaters and the capability of manufacturers to ramp up production. DOE is specifically seeking comment on how long it would take, and how much it would cost, for manufacturers to convert all product lines to heat pump water heaters if it were required by an amended energy conservation standard. Additionally, DOE is seeking comment about the capability of water heater installers and servicers to meet the unique demands created by heat pump water heaters. DOE is requesting comment about how long it would take to train installers and servicers to be able to serve the market created if heat pump water heaters were required by an amended energy conservation standard. DOE will consider all of these factors as it weighs the benefits and burdens of each TSL. (See Issue 11 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

c. General Comments

DOE received several general comments about the current condition of heat pump water heater technology and the market for this product. These comments are discussed immediately below.

Southern commented that, although not desirable, it would be less objectionable to require heat pump water heaters if the electric storage water heater class could be split at 40 gallons, with products larger than 40 gallons having a heat pump water heater efficiency level requirement, and products smaller than 40 gallons having a higher electric resistance efficiency level. (Southern, No. 50 at p. 4)

EEI stated that there is a Federal tax credit for heat pump water heaters. (EEI, Public Meeting Transcript, No. 34.4 at p. 60) AHRI stated that the ENERGY STAR program has been established since the previous rulemaking, creating greater recognition by all interested parties about the need to save energy. AHRI commented that every manufacturer is probably investigating whether it can maintain a feasible business providing heat pump water heaters. However, AHRI also commented that DOE should not consider heat pump water heaters as an energy conservation standard for 2015. According to the commenter, the water heater industry and American consumers are experiencing difficult economic conditions, and consumers are not likely to purchase heat pump water heaters that are expensive. AHRI also stated that resistance-type electric storage water heaters are near their maximum efficiencies and need to evolve. AHRI commented that current conditions prohibit setting an efficiency minimum that would require a heat pump water heater. (AHRI, Public Meeting Transcript, No. 34.4 at pp. 60–62)

AHRI stated that current market conditions and the introduction of heat pump water heater models by water heater manufacturers are allowing heat pump water heaters to take root in the market. Further, AHRI asserted that the heat pump water heater market needs to mature and that DOE should allow the market and consumers to respond to the availability of higher-technology electric storage water heaters that are reliable and meet consumer utility needs. (AHRI, Public Meeting Transcript, No. 34.4 at pp. 64–65)

ACEEE stated that ENERGY STAR's water heater program demonstrates that heat pump water heaters are viable. The commenter stated that three major manufacturers have announced or told ACEEE about a qualifying heat pump

water heater to be marketed to consumers in 2009, which is more than 5 years before energy conservation standard would take effect. (ACEEE, No. 35 at pp. 4–5) ACEEE asserted that cost-effectiveness should be examined because profits are likely to be greater for more expensive heat pump water heaters, even in a very competitive market, and that these higher cost products may benefit the industry in the current economic conditions. According to ACEEE, consumer preference can be very strong, and market studies show that consumers have a very sophisticated understanding of the benefits of very expensive heat pump water heaters. ACEEE noted that consumer preference has been seen for gas-condensing furnaces and other high-priced products in other markets that are considered commodity markets. (ACEEE, Public Meeting Transcript, No. 34.4 at p. 66)

PG&E, SDGE, and SoCal Gas supported DOE's decision to include integral heat pump water heaters as a max-tech efficiency level for electric storage water heaters. PG&E, SDGE, and SoCal Gas believe the heat pump water heater technology has made important advances in recent years and pointed to the actions of General Electric as a major manufacturer speaking to the viability of this technology. (PG&E, No. 38 at p. 2) NEEA and NPCC also agreed with the inclusion of heat pump water heaters in the rulemaking analyses, while acknowledging the failures issues discussed in the preliminary analyses. (NEEA and NPCC, No. 42 at p. 5) The American Gas Association (AGA) commented that there appear to be no significant barriers to including heat pump water heaters in the design options under consideration for electric storage water heaters. (AGA, No. 44 at p. 2)

GE commented that heat pump water heaters have significant potential for increasing the energy efficiency of electric storage water heaters, but that shipments are currently very low (0.1 percent of all water heaters shipped). According to GE, heat pump water heaters should be encouraged through ENERGY STAR and other consumer incentives to allow time for heat pump water heaters to penetrate the market and prove themselves in terms of energy cost savings and reliability. GE stated that the heat pump water heater market is too new to consider establishing a minimum standard at a level that would require heat pump water heater technology at this time. (GE, No. 51 at pp. 1–2) Southern also commented that levels requiring heat pump water heater technology are not appropriate as an amended energy conservation standard level at this time. (Southern, No. 50 at p. 4)

DOE believes that the ENERGY STAR program and Federal tax credit program, along with recent developments in heat pump water heater technology due to manufacturers' efforts, have made heat pump water heaters a much more viable technology for improving energy efficiency. As such, DOE is tentatively proposing to consider heat pump water heaters in this analysis as a design option for improving the efficiency of conventional electric storage water heaters. DOE considers the possibility of fuel switching resulting from heat pump water heater standards for electric storage water heaters in its shipments analysis (see section IV.F.1).

The technologies evaluated in the screening analysis all have been used or are in use in commercially-available products, or exist in working prototypes. These technologies all incorporate materials and components that are commercially available in today's supply markets for the products covered by this NOPR. Therefore, DOE believes all of the efficiency levels evaluated in this notice are technologically feasible.

C. Engineering Analysis

The engineering analysis develops cost-efficiency relationships to show the manufacturing costs of achieving increased efficiency. DOE has identified the following three methodologies to generate the manufacturing costs needed for the engineering analysis: (1) The design-option approach, which provides the incremental costs of adding to a baseline model design options that will improve its efficiency; (2) the efficiency-level approach, which provides the relative costs of achieving increases in energy efficiency levels, without regard to the particular design options used to achieve such increases; and (3) the cost-assessment (or reverse-engineering) approach, which provides ''bottom-up'' manufacturing cost assessments for achieving various levels of increased efficiency, based on detailed data as to costs for parts and material, labor, shipping/packaging, and investment for models that operate at particular efficiency levels.

For the preliminary analysis, DOE conducted the engineering analysis using both the efficiency level approach to identify incremental improvements in efficiency for each product and the cost-assessment approach to develop a cost for each efficiency level. DOE identified the most common residential heating products on the market and determined their corresponding efficiency levels, the component specifications, and the distinguishing technology features associated with those levels. After identifying the most common products that represent a cross section of the market, DOE gathered additional information using reverse-engineering methodologies; product information from manufacturer catalogs; and discussions with manufacturers and other experts of water heaters, DHE, and pool heaters. This approach provided useful information, including identification of potential technology paths manufacturers use to increase energy efficiency.

DOE generated a bill of materials (BOM) by disassembling multiple manufacturers' products that span a range of efficiency levels for each of the three product categories. The BOMs describe the product in detail, including all manufacturing steps required to make and/or assemble each part. Subsequently, DOE developed a cost model that converted the BOMs and efficiency levels into manufacturer production costs (MPCs). By applying derived manufacturer markups to the MPCs, DOE calculated the manufacturer selling prices and constructed industry cost-efficiency curves.

DOE received several comments from interested parties on the approach to the engineering analysis. Rheem stated its support for DOE's product teardown plan and evaluation of insulations levels. (Rheem, No. 49 at p. 4) Southern agreed overall with the technical and engineering assumptions in the TSD. (Southern, No. 50 at p.1)

Because DOE did not receive any comments from interested parties opposing its general approach to the engineering analysis, DOE continued to use the same approach for the NOPR phase of this rulemaking. However, DOE did receive specific comments from interested parties on certain aspects of the engineering analysis. A brief overview of the methodology, a discussion of the comments DOE received, DOE's response to those comments, and any adjustments DOE made to the engineering analysis methodology or assumptions as a result of those comments is presented in the sections below. See chapter 5 of the NOPR TSD for additional details about the engineering analysis.

1. Representative Products for Analysis

For the engineering analysis, DOE reviewed all of the product classes of residential water heaters (storage-type and instantaneous), DHE, and pool heaters. Since the storage volume and input capacity affect the energy efficiency of residential heating

products, DOE examined each product type separately. Within each product type, DOE chose units for analysis that represent a cross section of the residential heating products market. The analysis of these representative products and product classes allowed DOE to identify specific characteristics that could be applied to all of the products across a range of storage and input capacities, as appropriate.

a. Water Heaters

For residential, storage-type water heaters, the volume of the tank significantly affects the amount of energy consumed, because it takes more energy to heat a larger volume of water from a given temperature to a higher temperature than it does to do the same for a smaller volume of water. Also, an increase in the tank volume can create an increase in the tank surface area, leading to higher standby losses of two otherwise identical tanks (*i.e.,* same insulation thickness, same materials). For the preliminary analysis, DOE examined specific storage volumes for gas-fired, oil-fired, and electric storage water heaters (referred to as representative storage volumes and shown in Table IV.9) because the energy efficiency equations for residential water heaters established by EPCA are a function of each product's storage volume. DOE reviewed the shipments data AHRI provided to determine the storage volume corresponding to the highest number of shipments for gas-fired water heaters, oil-fired water heaters, and electric water heaters. DOE conducted a similar review of shipment data for instantaneous gas-fired water heaters and determined the input rating corresponding to the highest number of shipments (*i.e.,* 199,000 Btu/h, as shown in Table IV.9) since storage volume does not vary for this product class.

DOE did not receive any comments in response to the preliminary analysis on the representative units for residential water heaters, and as such, used the same approach to determining representative units for the NOPR analysis. However, on review of the shipments for oil-fired storage water heaters for the NOPR analysis, DOE determined that oil-fired storage water heaters with 32 gallons of storage volume have a higher number of shipments than those with 30 gallons, and adjusted the representative unit accordingly.

TABLE IV.9—REPRESENTATIVE RESIDENTIAL WATER HEATERS ANALYZED

Residential water heater class	Representative storage volume (gallons)
Gas-Fired Storage Type	40
Electric Storage Type	50
Oil-fired Storage Type	32
Instantaneous Gas Fired	0 (199,000 Btu/h input capacity)

Once DOE conducted the primary analysis on the representative rated storage volumes for each of the product classes, DOE extended the analysis to other rated storage volumes using the cost model and the energy efficiency equations. See section IV.C.7 for additional details. For gas-fired instantaneous water heaters, DOE used the analysis for the 199 kBtu/h input capacity and applied it to all products within the product class.

b. Direct Heating Equipment

Current energy conservation standards for DHE are not determined by an equation, but by input capacity ranges. DOE examined one specific input capacity range for gas wall fan, gas wall gravity, gas floor, and gas room DHE in the preliminary analysis. In addition, DOE examined one specific input capacity range for gas hearth DHE in the NOPR analysis. The specific input ranges DOE analyzed are referred to as representative input rating ranges. DOE reviewed the DHE (including vented hearth products) shipment data AHRI and HPBA provided for this rulemaking and found the input rating range corresponding to the highest number of shipments for gas wall fan, gas wall gravity, gas floor, and gas room DHE. DOE did not receive any comments from interested parties in response to the preliminary analysis on the representative ranges for traditional DHE, and used the same approach to determine the ranges for the NOPR analysis. DOE did not receive shipments data categorized by capacity ranges for gas hearth DHE, and, therefore, determined the representative capacity range based on the number of models available on the market in each capacity range. DOE added a representative range for gas hearth DHE for the NOPR analysis. In addition, after reorganizing the DHE product classes, DOE reviewed gas room DHE shipments for the NOPR, and changed the representative input range for gas room DHE from over 46,000 Btu/h to between 27,000 and 46,000 Btu/h. DOE found the input range between 27,000 and 46,000 Btu/h contained the highest number of models for gas room DHE when the gas hearth DHE were removed from consideration. Table IV.10 presents the representative rated input rating ranges for residential DHE. For the remaining DHE product classes (*i.e.,* wall fan, wall gravity, and floor), DOE did not receive any comments in response to the preliminary analysis on the representative units, and, therefore, used the same units for the NOPR analysis.

TABLE IV.10—REPRESENTATIVE RESIDENTIAL DIRECT HEATING EQUIPMENT PRODUCTS AS DESCRIBED BY INPUT CAPACITY AND DEFINED BY BTU/H

Direct heating equipment design type	Representative input rating range (Btu/h)
Gas Wall Fan	Over 42,000.
Gas Wall Gravity	Over 27,000 and up to 46,000.
Gas Floor	Over 37,000.
Gas Room	Over 27,000 and up to 46,000.
Gas Hearth	Over 27,000 and up to 46,000.

After analyzing the representative product class (*i.e.,* input rating range), DOE applied the analysis to the remaining product classes for each residential DHE type. Unlike storage water heaters, an equation is not applied to relate the range of input ratings. Instead, DOE proposes to maintain the AFUE difference between each input rating range as established by EPCA. That is, if the amended energy conservation standard is increased by two AFUE percentage points for the representative product class, for example, the amended energy conservation standards for the other product classes within this product type would all rise by two AFUE percentage points. The stringency resulting from an amended standard is constant across the range of inputs for a given product type. This approach appears to be consistent with the relationship between input capacity and efficiency exhibited by models currently available on the market based on DOE's review of the AHRI directory for DHE. In addition, DOE notes that the larger DHE units usually contain larger heat exchangers to get higher efficiencies. These larger heat exchangers have increased surface area, which also increases the convected losses to the surroundings. The increased losses result in lower AFUEs. Based on the market assessment and engineering principles, DOE believes the approach for maintaining the AFUE difference between each input rating range is reasonable.

c. Pool Heaters

There is only one product class for residential gas-fired pool heaters, but this product class covers a wide range of input ratings. Although within the same product class, the variation in input rating is large enough to create variations in pool heater design (*e.g.,* large variations in input will vary material usage and MPC). Therefore, for the preliminary analysis, DOE reviewed the shipment data from AHRI and found the input rating corresponding to the highest number of shipments, which was 250,000 Btu/h input rating. Because DOE did not receive any comments on the representative input rating in the preliminary analysis, DOE used the same approach for the NOPR analysis. Consequently, DOE used 250,000 Btu/h as the representative input rating for residential pool heaters in the NOPR analysis.

The engineering analysis results for the representative product classes are used in the remaining DOE analyses, including the life-cycle cost analysis and the national impact analysis.

2. Ultra-Low NO_X Gas-Fired Storage Water Heaters

In the preliminary analysis, DOE did not address ultra-low NO_X gas-fired storage water heaters separately from gas-fired storage water heaters with standard burners (*i.e.,* non-ultra-low NO_X burner). DOE developed a single cost-efficiency curve for all gas-fired storage water heaters. However, DOE received several comments in response to the preliminary analysis on the cost of ultra-low NO_X gas-fired storage water heaters. As discussed in section IV.A.3.a above, several local air quality management districts (mostly in California) limit the allowable NO_X emissions from residential water heaters.

BWC commented that there is a substantial cost increase to comply with the ultra-low NO_X requirements. (BWC, No. 46 at p.1) Rheem commented that the MPC and MSP did not capture higher costs and prices associated with models that comply with ultra-low NO_X requirements. (Rheem, No. 49 at pp. 4, 7) Rheem stated that although DOE included the costs associated with Flammable Vapor Ignition Resistant (FVIR) technology, DOE did not, but should have, included the costs associated with ultra-low NO_X emissions requirements in its analysis. Further, Rheem stated that given the continued adoption of ultra-low NO_X requirements in highly-populated regions such as California and Texas, DOE should revise its baseline cost estimates and include weighting for the population subject to ultra-low NO_X regulations. (Rheem, No. 49 at p. 7)

A.O. Smith stated that the types of burners currently used to comply with the ultra-low NO_X requirements in an atmospheric water heater are much more restrictive (*i.e.,* produce higher pressure drops) than conventional burners. According to the commenter, since gas-fired storage water heaters complying with the ultra-low NO_X requirements also must comply with FVIR requirements, the units must also have flame arrestors on the air inlet, which further restricts the system. To boost the efficiency of ultra-low NO_X gas-fired storage water heaters, manufacturers typically make the flue baffle more effective. In certain instances, given these additional restrictions, the only way for some of these units to continue to meet the energy conservation standards is to add a blower and/or power burner to the heater, which would greatly increase the manufacturing and installation costs. (A.O. Smith, No. 37 at p. 9) SoCal Gas agreed with the storage manufacturers, stating that ultra-low NO_X requirements similar to those in the Southern California Air Quality Management District are being implemented in other regions. SoCal Gas stated that ultra-low NO_X requirements necessitate a different type of product, which creates a cost issue because product costs and cost increases are dramatically higher. (SoCal Gas, Public Meeting Transcript, No. 34.4 at pp. 41–42)

In response to the comments on the preliminary analysis, DOE developed a separate analysis for ultra-low NO_X gas-fired storage water heaters. DOE developed cost-efficiency curves for ultra-low NO_X gas-fired storage water heaters by performing a teardown analysis (section IV.C.4.a) of several ultra-low NO_X products from a variety of manufacturers at several efficiency levels. More specifically, DOE analyzed ultra-low NO_X gas-fired storage water heaters at a 40-gallon representative storage volume, as was done for gas-fired storage water heaters with a standard burner. DOE then compared the ultra-low NO_X gas-fired storage water heaters to the comparable gas-fired storage water heaters that use standard burner technology (*i.e.,* not ultra-low NO_X compliant). DOE also considered the impact of ultra-low NO_X regulations for the cumulative regulatory burden (see section V.B.2.f).

DOE used the cost-efficiency curves for ultra-low NO_X gas-fired storage water heaters in the downstream analysis, including the LCC. DOE distributed the costs based on those geographical areas with ultra-low NO_X regulations. See chapter 5 of the NOPR TSD for the cost-efficiency curves for ultra-low NO_X gas-fired storage water heaters.

3. Efficiency Levels Analyzed

For each of the representative products, DOE analyzed multiple efficiency levels and estimated manufacturer production costs at each efficiency level. The following subsections provide a description of the full efficiency level range DOE analyzed from the baseline efficiency level to the maximum technologically feasible (max-tech) efficiency level for each product class. In some cases, the highest efficiency level was identified through review of available product literature or prototypes for products not commercially available.

For each product class, DOE selected baseline units as reference points, against which DOE measured changes resulting from potential amended energy conservation standards. Generally, the baseline unit in each product class: (1) Represents the basic

characteristics of equipment in that class; (2) just meets current Federal energy conservation standards; and (3) provides basic consumer utility.

DOE conducted a survey of the residential heating products market to determine what types of products are available to consumers and to identify the efficiency levels corresponding to the highest number of models. Then, DOE established intermediate energy efficiency levels for each of the product classes that are representative of efficiencies that are typically available on the market or correspond to voluntary program targets such as ENERGY STAR. DOE reviewed AHRI's product certification directory, manufacturer catalogs, and other publicly-available literature to determine which efficiency levels are the most prevalent for each representative product class.

DOE determined the maximum improvement in energy efficiency that is technologically feasible (max-tech) for water heaters, DHE, and pool heaters, as required by section 325(o) of EPCA. (42 U.S.C. 6295(o)). For the representative product within a given product class, DOE could not identify any working products or prototypes at higher efficiency levels that were currently available beyond the identified max-tech level at the time the analysis was performed. DOE seeks comment on its max-tech efficiency levels.

Rheem commented generally in response to the preliminary analysis about the water heater max-tech levels DOE identified. Rheem asserted that there is little to no presence of max-tech water heating products in the United States. Further, Rheem commented that it supports the growth of max-tech products through ENERGY STAR, which helps to distinguish top-performing products and to stimulate market transformation, but the commenter stated that max-tech should not be considered for a Federal minimum standard. (Rheem, No. 49 at p. 2)

NRDC commented that max-tech levels face issues that are similar for all emerging technologies. It noted that: (1) Max-tech products are only produced and deployed on small scales, thereby limiting available data; (2) reliability is a concern, possibly due to small scale production; (3) costs are high but projected to decrease as production increases, although timing is unknown; (4) consumer reaction to new technologies and their amenities is unknown; and (5) units are more useful only in certain applications due to size, venting, or other inherent attributes. NRDC notes that DOE must consider all of these concerns when making a decision. (NRDC, No. 48 at pp. 1–2)

As stated above, EPCA requires DOE to determine the maximum improvement in energy efficiency or maximum reduction in energy use that is technologically feasible for each class of covered products. (42 U.S.C. 6295(o)). Therefore, DOE must consider and include an analysis of max-tech levels for residential heating products in this rulemaking. However, DOE notes that consideration of the max-tech level does not necessarily mean that it will be adopted as the level in the energy conservation standard for that product, because DOE must consider, in turn, all of the other statutory factors under 42 U.S.C. 6295(o).

In addition to identifying efficiency levels for each product class, DOE identified a particular technology or combination of technologies associated with each efficiency level in order to make the engineering analysis more transparent to interested parties. For each efficiency level, DOE lists technology and design changes manufacturers could use to improve product energy efficiency to achieve the given efficiency level. These technologies provide methods to increase product energy and are representative of technologies found in a typical model at a given efficiency level. While DOE recognizes that manufacturers use many different technologies and approaches to increase the energy efficiency of residential heating products, the presented technologies and combinations of technologies and their ordering are simply possible paths manufacturers could use to reach higher efficiency levels.

a. Water Heaters

The current Federal minimum energy conservation standards define the baseline efficiencies for residential water heaters as measured by the energy factor. These standards became effective on January 20, 2004. (10 CFR Part 430.32(d)) For water heaters, DOE applied the representative storage capacity to the energy efficiency equations in 10 CFR Part 430.32(d) to calculate the EFs of the baseline units.

i. Gas-Fired Storage Water Heaters

As described in section IV.C.2, DOE performed a separate analysis for gas-fired water heaters with a standard burner and gas-fired water heaters with an ultra-low NO_X burner for this NOPR. Table IV.11 and Table IV.12 show the efficiency levels DOE considered for gas-fired storage water heaters, along with the technologies that manufacturers could use to achieve the listed efficiencies. The technologies for standard burner gas-fired water heaters and ultra-low NO_X gas-fired water heaters vary due to differences in the operating characteristics of the burners. Ultra-low NO_X burners typically reduce the pressure in the flue, which can create problems if the pressures required to properly vent combustion products are not maintained. To mitigate these problems, manufacturers may reduce the amount of baffling or other airflow restrictions to ensure proper venting, which in turn may result in decreased efficiency. To overcome these issues, manufacturers must use power venting technology to achieve energy factors that are comparable to what they would achieve with a standard burner gas-fired storage water heater that can contain more baffling. Therefore, the technologies associated with ultra-low NO_X gas-fired water heaters are implemented at lower efficiency levels and yield a lower energy factor than the same technologies associated with gas-fired storage water heaters that use a standard burner.

TABLE IV.11—FORTY-GALLON GAS-FIRED STORAGE WATER HEATER, STANDARD BURNER

Efficiency level (EF)	Technology
Baseline (EF = 0.59)	Standing Pilot and 1″ Insulation.
Efficiency Level 1 (EF = 0.62)	Standing Pilot and 1.5″ Insulation.
Efficiency Level 2 (EF = 0.63)	Standing Pilot and 2.0″ Insulation.
Efficiency Level 3 (EF = 0.64)	Electronic Ignition, Power Vent and 1″ Insulation.
Efficiency Level 4 (EF = 0.65)	Electronic Ignition, Power Vent and 1.5″ Insulation.
Efficiency Level 5 (EF = 0.67)	Electronic Ignition, Power Vent and 2″ Insulation.
Efficiency Level 6 – Max-Tech (EF = 0.80)	Condensing, Power Vent, 2″ Insulation.

TABLE IV.12—FORTY-GALLON GAS-FIRED STORAGE WATER HEATER, ULTRA-LOW NO_X BURNER

Efficiency level (EF)	Technology
Baseline (EF = 0.59)	Standing Pilot and 1″ Insulation.
Efficiency Level 1 (EF = 0.62)	Standing Pilot and 2″ Insulation.
Efficiency Level 2 (EF = 0.63)	Electronic Ignition, Power Vent, and 1″ Insulation.
Efficiency Level 3 (EF = 0.64)	Electronic Ignition, Power Vent and 1.5″ Insulation.
Efficiency Level 4 (EF = 0.65)	Electronic Ignition, Power Vent and 2″ Insulation.
Efficiency Level 5 (EF = 0.67)	Not Attainable (would go to condensing).
Efficiency Level 6 – Max-Tech (EF = 0.80)	Condensing, Power Vent, 2″ Insulation.

DOE found gas-fired storage water heaters capable of condensing operations at the highest efficiency level (*i.e.,* max-tech). More energy can be extracted by condensing the combustion products in the flue gas, which extracts more heat in the form of latent energy, leading to an increase in the thermal efficiency of the gas-fired storage water heater. In the preliminary analysis, DOE identified the max-tech EF for condensing gas-fired storage water heaters as 0.77. DOE received several comments from interested parties (discussed below) which have caused DOE to revise its estimate upwards to 0.80 EF for condensing units.

NRDC stated that condensing gas-fired water heaters are the future of gas-fired storage water heaters. (NRDC, No. 48 at p. 1) ACEEE commented that the max-tech efficiency level DOE considered for gas-fired storage water heaters is lower than the ENERGY STAR level for the condensing storage water heater category, which is set at 0.80 EF. ACEEE stated that selecting 0.77 EF from a range of identified energy factors for condensing gas-fired storage water heaters ranging from 0.77 to 0.82 EF will bias the results of the analysis and that the five percentage points of the energy factor correspond to less gas usage. ACEEE expressed concern with such a divergence between ENERGY STAR and the energy conservation standards rulemaking. (ACEEE, Public Meeting Transcript, No. 34.4 at p. 75–76) Further, ACEEE recommended that DOE analyze efficiency levels at 0.77 EF, 0.80 EF, and 0.82 EF for gas-fired storage water heaters (ACEEE, No. 35 at p. 3) ASAP stated that DOE's analysis may be missing some efficiency levels. For gas-fired storage water heaters in particular, ASAP commented that condensing units may span a range of efficiencies, and a 0.77 EF may be an intermediate level that is not max-tech. (ASAP, Public Meeting Transcript, No. 34.4 at p. 92)

A.O. Smith stated its support for the max-tech efficiency levels for water heaters as shown in the preliminary engineering analysis. Specifically, A.O. Smith supports a 0.77 EF for gas-fired condensing water heaters, which meets DOE's criteria of being technically feasible. (A.O. Smith, No. 37 at p. 3)

In selecting the efficiency level for the max-tech condensing gas-fired water heater for the NOPR analysis, DOE carefully considered all comments from interested parties regarding this issue. There are no products currently available on the residential gas-fired storage water heater market that can achieve the efficiencies that will be made possible by condensing technology, and, therefore, it is difficult to determine the highest possible EF that can be achieved using this technology. Although condensing gas-fired storage water heaters are not currently available on the market in residential sizes, they are available in commercial sizes that could be scaled down for residential use. Commercial condensing gas-fired storage water heaters have efficiencies of up to 96 percent thermal efficiency. There is no direct mathematical conversion that can be used to derive energy factor (the efficiency metric for residential water heaters) from thermal efficiency (the efficiency metric used for commercial water heaters). Therefore, in making the determination of a max-tech level for gas-fired storage water heaters, DOE considered feedback from interested parties, information gathered during manufacturer interviews, available reports and literature, and its own technical expertise. As a result, DOE has revised the max-tech water heater efficiency to 0.80 EF for the NOPR analysis. This level is cited as the max-tech for condensing water heaters in several reports reviewed by DOE (described in more detail below), and DOE believes it is the maximum possible energy factor that can possibly be achieved by a gas-fired storage water heater at this time. DOE notes that A.O. Smith presentation given at the 2009 ACEEE Hot Water Forum identifies 0.80 EF as the maximum possible EF for residential condensing gas-fired water heaters. For more information visit *http://www.aceee.org;* the presentation is available at: *http://www.aceee.org/conf/09whforum/PlenarySession1-AdamsPresentation.pdf.*

In addition, the Super Efficient Gas Water Heating Appliance Initiative (SEGWHAI) Final Project Report (April 2007) identified efficiency factors at 0.80 and above as achievable condensing efficiency levels for gas-fired storage water heaters, although these levels were based on theoretical modeling of gas-fired water heaters and have never been demonstrated in working prototypes. For more information, visit *http://www.segwhai.org.* A 0.80 EF level is also consistent with the max-tech level identified by ENERGY STAR in its determination of an appropriate efficiency level for gas-fired storage water heaters utilizing condensing technology. For more information, visit *http://www.energystar.gov.* As explained above, DOE seeks comment on the max-tech efficiency levels identified for the analyses, especially those for gas-fired water heaters. (See Issue 1 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

DOE received several comments about the other efficiency levels and technologies identified for the preliminary analysis.

Southern commented on the technologies for efficiency level 3 for gas-fired storage water heaters, stating its belief that adding electronic ignition would not require manufacturers to use power vent systems. (Southern, Public Meeting Transcript, No. 34.4 at p. 87)

DOE agrees with Southern's comment, because an assessment of the current market demonstrates that gas-fired storage water heaters using electronic ignition systems do not always include power vent technologies. However, DOE believes many manufacturers that use power vent technologies to reach efficiency level 3, 4, and 5 also use electronic ignition systems since the fan already requires electricity. Therefore, DOE paired electronic ignition and power venting technologies with one inch of insulation as a potential approach to achieving efficiency level 3. DOE believes that manufacturers implement designs that have both electronic ignition and power vent

technology at this efficiency level. At efficiency levels 1 and 2, DOE used standing pilot systems for gas-fired storage water heaters, which do not require line electricity. Even though efficiency level 3 and above for gas-fired storage water heaters would require consumers to have an external electrical connection, DOE has determined that consumers would continue to have other non-electrical alternatives such as other types of gas-fired water heaters (*e.g.,* gas-fired instantaneous water heaters).

ACEEE stated that DOE should include an efficiency level that considers flue and vent damper technologies instead of power vent technology. The commenter stated that this may not significantly affect the energy factor because the test procedure does not account for the value of entrained bypass air. ACEEE asserted that flue and vent dampers may have much lower costs than power vents and may have less entrained air. Further, ACEEE stated that flue and vent dampers do not require exhaust temperatures to be reduced to a level that can be handled by PVC plastics. (ACEEE, Public Meeting Transcript, No. 34.4 at p. 88)

DOE focused its analysis on technologies that would impact efficiency, as measured by the DOE test procedure. DOE discussed its consideration of damper technologies as part of the screening analysis in section IV.B.1.a. For the engineering analysis, DOE examined the most common methods used by manufacturers to improve energy factor, as determined using DOE's test procedures specified in 10 CFR part 430, subpart B, appendix E. Through its reverse-engineering analysis, and review of manufacturer literature, DOE found that manufacturers most often use power vent technology to achieve higher efficiency for gas-fired storage water heaters. Thus, DOE considered efficiency levels that are typically achieved using a power vent design in the NOPR analysis.

Rheem commented that at the preliminary analysis efficiency level 5 (*i.e.,* 0.66 EF), gas-fired storage water heaters may require operation at and near condensing efficiency levels, which can be undesirable. (Rheem, No. 49 at p. 4)

DOE notes that several manufacturers already manufacture water heaters at 0.66 EF, making gas-fired storage water heaters at 0.66 EF practical to manufacture, install, and service, and technologically feasible. DOE is unaware of any adverse impacts to either product utility or health and safety that would result from a water heater at 0.66 EF. DOE reviewed the market for gas-fired water heaters at 0.66 EF and 0.67 EF. DOE did not find any products currently on the market, which incorporate features to accommodate condensing operation. Therefore, DOE sees no reason to eliminate that efficiency level from consideration. However, DOE did revise efficiency level 5 from 0.66 EF for the preliminary analysis to 0.67 EF for the NOPR analysis to maintain consistency with the ENERGY STAR Program. DOE notes there are also products currently offered with a 0.67 EF at the representative volume size.

Rheem also stated that the technologies identified to increase energy efficiency for gas-fired storage water heaters are appropriate. However, Rheem asserted that the insulation thicknesses that would be required to achieve efficiency levels 1, 2, and 3 are understated. Rheem commented that efficiency level 1 requires 2 to 2.5 inches of insulation, for example. (Rheem, No. 49 at p. 4)

DOE research suggests that the tank thicknesses listed at various efficiency levels are consistent with products available on the market. DOE reviewed manufacturer literature, which typically includes information on energy factor and insulation thicknesses. For the preliminary analysis, DOE reverse-engineered several gas-fired water heaters to verify the technologies used to improve energy efficiency, including insulation thicknesses. Since the preliminary analysis, DOE also hired an independent testing facility to determine the EF of a representative sample of water heaters across multiple efficiency levels for the NOPR. These water heaters were subsequently disassembled to verify the technologies used to increase energy efficiency. In the end, DOE came to the same conclusions as in the preliminary analysis regarding insulation thicknesses. Therefore, DOE believes the results of its assessment of insulation thicknesses at various efficiency levels are accurate.

Rheem also commented that baseline technologies for 40-gallon gas-fired storage water heaters do not apply uniformly for the entire range of rated storage volumes, and as such, DOE should account for the additional manufacturing, installation, and shipping costs for larger size water heaters. (Rheem, No. 49 at p. 4)

For the NOPR engineering analysis, DOE performed teardowns of models at multiple nominal capacities and noted any differences (including minor differences) that occurred. DOE used the knowledge gained from these teardowns when it extended the cost analysis to the other capacity (gallon) sizes. As part of its analysis, DOE accounted for additional installation costs and shipping costs of larger units (see sections IV.E.2.a and IV.C.4.f, respectively).

ii. Electric Storage Water Heaters

Table IV.13 shows the efficiency levels considered for electric storage water heaters, along with their corresponding potential technologies that could be used to achieve those levels.

TABLE IV.13—FIFTY-GALLON ELECTRIC STORAGE WATER HEATER

Efficiency level (EF)	Technology
Baseline (EF = 0.90)	1.5″ Foam Insulation.
Efficiency Level 1 (EF = 0.91)	2″ Foam Insulation.
Efficiency Level 2 (EF = 0.92)	2.25″ Foam Insulation.
Efficiency Level 3 (EF = 0.93)	2.5″ Foam Insulation.
Efficiency Level 4 (EF = 0.94)	3″ Foam Insulation.
Efficiency Level 5 (EF = 0.95)	4″ Foam Insulation.
Efficiency Level 6 (EF = 2.0)	Heat Pump Water Heater.
Efficiency Level 7 – Max-Tech (EF = 2.2)	Heat Pump Water Heater, More Efficient Compressor.

For electric storage water heaters, although no integrated heat pump water heaters were available on the market at the time the analysis was developed, such products had been developed and manufactured in the past, three models

have been certified under the ENERGY STAR program, and others are currently under development by other water heater manufacturers. DOE found electric heat pump water heaters capable of obtaining EFs of 2.2 in the preliminary analysis and retained this level as the max-tech level in the NOPR analysis. DOE received several comments on the efficiency levels and technologies presented in the preliminary analysis.

NRDC commented that heat pump water heaters are the future of electric storage water heater technology. (NRDC, No. 48 at p. 1) ASAP stated that DOE may be missing some efficiency levels in its analysis. ASAP commented that an efficiency level between efficiency level 5 and the max-tech for electric storage water heaters may merit analysis, particularly if ENERGY STAR has a heat pump water heater at 2.0 EF. (ASAP, Public Meeting Transcript, No. 34.4 at p. 92) Similarly, ACEEE recommended DOE analyze levels at 1.7 EF, 2.0 EF, and 2.2 EF. (ACEEE, No. 35 at p. 3) Additionally, ACEEE stated that prior analyses have been conducted for heat pump water heaters at 2.5 EF, although further specifics were not provided. (ACEEE, Public Meeting Transcript, No. 34.4 at p. 94) BWC referred DOE to comments made during the previous residential water heater rulemaking on July 18, 1994. (BWC, No. 46 at p. 2) BWC asserted that the previous rulemaking stated a reasonable energy factor of 1.50, but that the current rulemaking does not. BWC stated its belief that 1.5 EF is still a reasonable EF for heat pump water heaters. (BWC, No. 46 at p. 2)

In response to these comments, DOE revised the efficiency levels considered for electric storage water heaters to include an intermediate heat pump water heater efficiency level at 2.0 EF for the NOPR analysis. This is not the max-tech level, but it does represent a significant change in technology and increase in efficiency over the traditional electric storage heater technology. This technology would also be easier for manufacturers to achieve than the max-tech 2.2 EF. DOE notes this efficiency level also corresponds to the level set forth by the ENERGY STAR program. DOE did not find any heat pump water heaters currently available or in the research stage with a 1.7 EF. In addition, DOE believes it is unlikely that manufacturers will offer products below the ENERGY STAR level, which is at 2.0 EF. Currently, there are also Federal tax credits for heat pump water heaters with an energy factor greater than or equal to 2.0 EF. Additionally, DOE maintained 2.2 EF as the max-tech efficiency level. Although ACEEE commented that analysis has been performed on heat pump water heaters with EFs of up to 2.5, ACEEE did not indicate the source of this analysis, and DOE could not identify any heat pump water heaters at 2.5 EF through its research efforts. The highest EF obtained in prototype designs currently being developed is 2.2 EF.

In response to the technology options presented in the preliminary analysis, AHRI stated that increasing the insulation on an electric storage water heater from 3 to 4 inches would not increase the energy factor of such magnitude by 0.01 EF point. AHRI does not believe that an increase in the energy factor would be seen using DOE's test procedure when only the insulation thickness is increased and no other design changes are made to eliminate many of the thermal short circuits present in a water heater. (AHRI, Public Meeting Transcript, No. 34.4 at pp. 90–91) Rheem also commented that DOE should recognize that there are diminishing returns for added foam insulation, adding that it is unclear how the efficiency levels for electric storage water heaters with 3 and 4 inches of insulation were evaluated to yield the proposed efficiency levels. (Rheem, No. 49 at p. 3)

DOE research determined the technology options manufacturers typically use to improve product efficiency, and was based on multiple data sources including manufacturer literature, which usually includes information on energy factor and insulation thicknesses. DOE also conducted a teardown analysis of electric storage water heaters for the preliminary analysis. For the NOPR analysis, DOE tested the EF of water heaters and then performed a teardown analysis on those water heaters across various EF ratings to confirm the technologies used for increasing efficiency. Although insulation thickness is not the only design change, DOE believes it is the driving factor in increasing the EF for electric storage water heaters, and, therefore, is listed as a commonly used technology option. For these reasons, DOE did not revise the technology options for EL4 and EL 5 for electric storage water heaters for the NOPR analysis.

iii. Oil-Fired Storage Water Heaters

Table IV.14 presents the efficiency levels DOE considered for oil-fired storage water heaters, along with the technology options that manufacturers could use to achieve the listed efficiency.

TABLE IV.14—THIRTY-TWO-GALLON OIL-FIRED STORAGE WATER HEATER WITH BURNER ASSEMBLY

Efficiency level (EF)	Technology
Baseline (EF = 0.53)	1″ Fiberglass Insulation.
Efficiency Level 1 (EF = 0.54)	1.5″ Fiberglass Insulation.
Efficiency Level 2 (EF = 0.56)	2″ Fiberglass Insulation.
Efficiency Level 3 (EF = 0.58)	2.5″ Fiberglass Insulation.
Efficiency Level 4 (EF = 0.60)	2″ Foam Insulation.
Efficiency Level 5 (EF = 0.62)	2.5″ Foam Insulation.
Efficiency Level 6 (EF = 0.66)	1″ Fiberglass Insulation, and Multi Flue Design.
Efficiency Level 7 – Max-Tech (EF = 0.68)	1″ Foam Insulation, and Multi Flue Design.

The most efficient residential oil-fired storage water heater on the market has an EF of 0.68 and includes electronic ignition, foam insulation, and enhanced flue baffles. DOE considered this efficiency level in the preliminary analysis and did not revise it for the NOPR analysis. However, DOE has determined that all oil-fired water heaters currently manufactured at the max-tech efficiency level incorporate a proprietary design. While DOE typically does not consider proprietary designs in its analysis due to impacts on competition likely to result from setting a minimum standard an efficiency level that is only achievable using a proprietary design, the agency has determined through discussions with manufacturers and its own technical expertise that the max-tech level for oil-fired storage water heaters is achievable using alternative approaches that are not proprietary. Therefore, DOE included

this efficiency level in the NOPR analysis. DOE believes manufacturers of oil-fired storage water heaters could achieve an EF of 0.68 by using a multiple flue design consisting of several flues to increase the heat transfer area, instead of a single, central flue that is standard on nearly all residential gas-fired and oil-fired storage water heaters. DOE revised its cost analysis for a 0.66 EF and 0.68 EF to represent a non-proprietary, multiple flue design.

DOE did not receive any comments in response to the preliminary analysis on the max-tech efficiency level or the other efficiency levels DOE considered for oil-fired storage water heaters. See chapter 5 of the NOPR TSD for more information about the efficiency levels DOE analyzed for oil-fired storage water heaters.

iv. Gas-Fired Instantaneous Water Heaters

Table IV.15 presents the efficiency levels DOE considered for gas-fired instantaneous water heaters, along with their corresponding potential technologies.

TABLE IV.15—ZERO-GALLON GAS-FIRED INSTANTANEOUS WATER HEATER, 199,000 BTU/H INPUT CAPACITY

Efficiency level (EF)	Technology
Baseline (EF = 0.62)	Standing Pilot.
Efficiency Level 1 (EF = 0.69)	Standing Pilot and Improved Heat Exchanger Area.
Efficiency Level 2 (EF = 0.78)	Electronic Ignition and Improved Heat Exchanger.
Efficiency Level 3 (EF = 0.80)	Electronic Ignition and Power Vent.
Efficiency Level 4 (EF = 0.82)	Electronic Ignition, Power Vent, Improved Heat Exchanger Area.
Efficiency Level 5 (EF = 0.84)	Electronic Ignition, Power Vent, and Improved Heat Exchanger Area.
Efficiency Level 6 (EF = 0.85)	Electronic Ignition, Power Vent, Direct Vent, and Improved Heat Exchanger Area.
Efficiency Level 7 (EF = 0.92)	Electronic Ignition, Power Vent, Direct Vent, Condensing.
Efficiency Level 8 − Max Tech (EF = 0.95)	Electronic Ignition, Power Vent, Direct Vent, Condensing (Max-Tech).

For the preliminary analysis, DOE identified a gas-fired instantaneous water heater capable of condensing with an EF of 0.92 as the max-tech level. DOE did not receive any comments on the max-tech gas-fired instantaneous water heaters. However, on reviewing the gas-fired instantaneous water heater market, DOE identified a new max-tech level at 0.95 EF for instantaneous gas-fired water heaters that use condensing technology.

DOE received several comments on the potential technologies incorporated at each efficiency level for gas-fired instantaneous water heaters that were presented in its preliminary engineering analysis. For the preliminary analysis, DOE considered the baseline to be the current Federal minimum standard (*i.e.,* 0.62 EF). Also, DOE did not incorporate the need to handle condensate into the installed cost estimates until products reached the 0.92 efficiency level for the preliminary analysis.

A.O. Smith suggested using a higher EF as the baseline efficiency level for gas-fired instantaneous water heaters. A.O. Smith noted that the vast majority of models available (per the AHRI Directory) are already well above the Federal minimum energy conservation standards of 0.62 EF. Since the majority of shipments in the current market for tank-type water heaters are at the Federal minimum energy conservation standards, DOE should use the same logic in choosing the baseline efficiency levels. (A.O. Smith, No. 37 at p. 3)

In response, DOE defines the baseline efficiency level as representative of the basic characteristics of equipment in that class. The characteristics of a gas-fired instantaneous water heater that just meets the 0.62 EF requirement would be representative of the most basic design that could be used for a gas-fired instantaneous water heater. Therefore, DOE did not change the baseline efficiency level for gas-fired instantaneous water heaters in the NOPR analysis.

At the public meeting for the preliminary analysis, DOE sought comment on safety concerns for gas-fired instantaneous water heaters at near-condensing efficiency levels. Operating at near-condensing levels may result in corrosive condensation formation, which may occur when the combustion products (which include water vapor) cool and condense. Manufacturers stated during engineering interviews that there is a safety margin needed to account for variations due to manufacturing tolerances, gas quality, differences in venting configurations, altitude, ambient conditions, and installer experience. DOE specifically requested information about how manufacturers would change current designs to mitigate corrosive condensate formation at near-condensing EF levels that may be present in some installations. DOE also requested comment about how manufacturers would alter current designs of gas-fired instantaneous water heaters to achieve safe operation if a potential amended standard required all installations to operate at near-condensing EF levels.

In response, Noritz stated that 0.83 EF is generally the borderline between condensing and non-condensing, the point at which units begin operating in condensing mode in at least some applications. (Noritz, Public Meeting Transcript, No. 34.4 at p. 113) Noritz also stated that condensation may occur in the near condensing range, which includes 0.83, 0.84, and 0.85 EF, and that it would change the copper heat exchanger in its standard product to stainless steel or better to manage the acidic condensate. (Noritz, Public Meeting Transcript, No. 34.4 at pp. 108–109) Noritz recommends that contractors install a condensate collector for instantaneous gas-fired water heaters with energy factors at 0.82 and 0.83, but acknowledged that the condensate collector is not included in a large percentage of installations. Therefore, Noritz stated that it would include a stainless steel heat exchanger with the condensate collector on higher efficiency products because of the increased safety issues associated with condensate management. (Noritz, Public Meeting Transcript, No. 34.4 at pp. 111–112) Further, Noritz said it would use this stainless steel heat exchanger nationwide for cost considerations and to keep the product standard. (Noritz, Public Meeting Transcript, No. 34.4 at pp. 109–110) Noritz commented that it handles acidic condensation with a stainless steel heat exchanger for the condensing instantaneous gas-fired water heater that has an energy factor of 0.92 EF, and that the product uses a primary copper heat exchanger and a secondary stainless steel heat exchanger. Noritz commented that some companies may use titanium, but this may not be realistic for Noritz because of the cost. (Noritz, Public Meeting

Transcript, No. 34.4 at pp. 109–110) In written comments, Noritz suggested that DOE's cost-efficiency curve should be continuous from 0.62 to 0.82, at which point there should be a kink in the curve, and the cost of producing a product with an EF of 0.83 or higher would see a steep increase. According to the commenter, the delineation between condensing and non-condensing product gas-fired instantaneous water heaters is at an EF of 0.83, which is borderline. Noritz asserted that manufacturers making products with an EF of 0.83 or above would need to design these products to deal with condensate, thereby requiring more expensive heat exchanger materials, condensate drains, and some method of treating (*i.e.,* neutralizing) the condensate for safe disposal. (Noritz, No. 36 at pp. 1–2)

Similar to Noritz's comments, AHRI noted that the costs of gas-fired instantaneous water heaters at near-condensing efficiency levels (*i.e.,* an EF of 0.84 and 0.85) need to include the measures manufacturers would use to minimize problems associated with excessive condensate in the appliance or its venting system. Specifically, AHRI noted that manufacturers must build safety factors into their designs to address the wide scope of installation conditions, such as colder incoming water temperatures or various venting systems. AHRI recommended that DOE model the heat exchanger using more corrosive-resistant materials, specifying a venting system using stainless steel, and adding a means to collect and dispose of condensate. (AHRI, No. 43 at p. 2) Regarding manufacturing products that operate near their condensing levels, AHRI stated that manufacturers want to build products that can be sold anywhere in the United States. However, there are parts of the United States where the incoming water is colder than the water specified by the test procedure, and this may cause pre-condensing. AHRI asserted that efficiency levels at these levels create safety issues, and that manufacturers would have to rely on manufacturing and installation skills due to the small margin between condensing and non-condensing operation. (AHRI, Public Meeting Transcript, No. 34.4 at pp. 110–111)

DOE acknowledges that for efficiency levels associated with near-condensing operation, a portion of the flue products may condense, and this percentage may vary as a function of field conditions. Additionally, operation where a portion of the flue gases condense (*i.e.,* near-condensing operation) creates the same safety issues associated with fully condensing operation because corrosive condensate is introduced into the heat exchanger and venting system during both types of operation. Therefore, DOE determined that for instantaneous gas-fired water heater efficiency levels 5 and 6 (energy factors 0.84 and 0.85, respectively), the costs associated with condensing operation should be accounted for in the MPCs. DOE revised its costs for the NOPR phase of this analysis for gas-fired instantaneous water heaters to account for design changes necessary to handle condensate at these efficiency levels.

b. Direct Heating Equipment

The baseline efficiencies for DHE are defined by the current Federal minimum energy conservation standards and the representative characteristics for products on the market that just meet Federal minimum energy conservation standards, as measured by the AFUE, and effective on January 1, 1990. (10 CFR part 430.32(i)) For DHE, the AFUEs corresponding to the representative input ratings in 10 CFR 430.32(i) were assigned as the baseline unit AFUEs.

Table IV.16 through Table IV.20 show the efficiency levels DOE analyzed for each product class of DHE, along with technologies that manufacturers could use to reach that efficiency level.

In the preliminary analysis, DOE identified various efficiency levels for gas wall fan DHE, including max-tech levels that used electronic ignition and induced draft combustion systems. DOE did not receive any comments pertaining to its efficiency levels or technologies for the preliminary analysis. After reviewing the efficiency levels and technologies for the NOPR analysis, DOE determined that the same efficiency levels and technologies are still appropriate.

TABLE IV.16—GAS WALL FAN-TYPE DHE, OVER 42,000 BTU/H

Efficiency level (AFUE)	Technology
Baseline (AFUE = 74)	Standing Pilot.
Efficiency Level 1 (AFUE = 75)	Intermittent Ignition and Two-Speed Blower.
Efficiency Level 2 (AFUE = 76)	Intermittent Ignition and Improved Heat Exchanger.
Efficiency Level 3 (AFUE = 77)	Intermittent Ignition, Two-Speed Blower, and Improved Heat Exchanger.
Efficiency Level 4 – Max-Tech (AFUE = 80)	Induced Draft and Electronic Ignition.

In the preliminary analysis, DOE identified gas wall gravity efficiency levels and technology options, which included a 75-percent AFUE level as the max-tech that could be achieved using induced draft. DOE received several comments in response.

AHRI cautioned that adding too many electrical devices to gas wall gravity-type DHE will at some point remove those products from that product class, because they will get converted into gas wall fan-type DHE. (AHRI, Public Meeting Transcript, No. 34.4 at pp. 69–70) AHRI also stated that an external electrical supply is required at some of the higher efficiency levels. AHRI asserted that when this occurs, that product can no longer be classified as a gravity-type product, but instead would be a fan-type product. Therefore, AHRI stated that the efficiency levels presented in the preliminary analysis are unrealistic for gas wall gravity-type DHE. (AHRI, Public Meeting Transcript, No. 34.4 at pp. 114–115) Additionally, Bock commented that adding induced draft technology to a gas wall gravity-type unit would exclude it from this equipment class. (Bock, Public Meeting Transcript No. 34.4 at p. 119)

In response to these comments, DOE further reviewed the gravity-type wall DHE market and the available products and technologies for the NOPR analyses. A ''vented wall furnace'' (*i.e.,* gas wall fan-type or gravity-type DHE) is defined as a vented heater that furnishes heat air circulated either by gravity or by a fan. 10 CFR 430.2. Gravity-type and fan-type wall DHE are differentiated only by the inclusion (fan-type) or exclusion (gravity-type) of a fan from the design. DOE agrees with Bock that the addition of an induced draft fan (which forces the combustion products through the heat exchanger to increase turbulence and, thus, heat transfer) would cause those products to be excluded from the wall gravity product class. Thus, for the NOPR analysis, DOE removed the

efficiency level at 75 AFUE that corresponded to induced draft technology. Instead, DOE identified 72 AFUE as the max-tech efficiency level, which can be attained using electronic ignition technology.

TABLE IV.17—GAS WALL GRAVITY-TYPE DHE, OVER 27,000 BTU/H AND UP TO 46,000 BTU/H

Efficiency level (AFUE)	Technology
Baseline (AFUE = 64)	Standing Pilot.
Efficiency Level 1 (AFUE = 66)	Standing Pilot and Improved Heat Exchanger.
Efficiency Level 2 (AFUE = 68)	Standing Pilot and Improved Heat Exchanger.
Efficiency Level 3 (AFUE = 71)	Standing Pilot and Improved Heat Exchanger.
Efficiency Level 4 – Max Tech (AFUE = 72)	Electronic Ignition.

In the preliminary analysis, DOE analyzed several efficiency levels for gas floor DHE, ranging from 57 AFUE up to 75 AFUE. DOE chose these levels based on the product availability listings contained in manufacturer specification sheets and DOE's previous analysis for direct heating equipment. However, for the NOPR, DOE conducted another review of the current market and determined that the market no longer offers models above 58 percent AFUE. This assessment was based on a review of updated information from AHRI Directory of Certified Products and manufacturer specification sheets. In its review, DOE identified heat exchanger improvements as a potential design approach to achieve the max-tech level 58 AFUE. DOE could not find any prototypes being developed above 58 percent AFUE. Accordingly, DOE based the efficiency levels for the NOPR analyses on those levels known to be technologically feasible for this product class and DOE only analyzed the baseline and max-tech efficiency levels, because no products are available at any other efficiency levels (See Table IV.18.).

TABLE IV.18—GAS FLOOR-TYPE DHE, OVER 37,000 BTU/H

Efficiency level (AFUE)	Technology
Baseline (AFUE = 57)	Standing Pilot.
Efficiency Level 1 – Max Tech (AFUE = 58)	Standing Pilot and Improved Heat Exchanger.

In the preliminary analysis, DOE included gas hearth DHE in the analysis for gas room DHE. For the NOPR analysis, DOE is establishing a separate product class for gas hearth DHE. Consequently, DOE revised the efficiency levels analyzed for gas room DHE to represent the market and technologies available for products, excluding those that are now gas hearth DHE, based upon the characteristics of the fireplace and DOE's proposed definition for ''gas hearth DHE.'' This resulted in the elimination of several efficiency levels that were considered in the preliminary analysis for gas room DHE. Also, the max-tech efficiency level has changed for the NOPR because of this restructuring of the DHE product classes. For room heaters, the use of electronic ignition and multiple heat exchangers has been identified as a possible approach to reach the max-tech efficiency level (AFUE = 83). These technologies are being used in room heaters that are currently on the market.

TABLE IV.19—GAS ROOM-TYPE DHE, OVER 27,000 BTU/H AND UP TO 46,000 BTU/H

Efficiency level (AFUE)	Technology
Baseline (AFUE = 64)	Standing Pilot.
Efficiency Level 1 (AFUE = 65)	Standing Pilot and Improved Heat Exchanger.
Efficiency Level 2 (AFUE = 66)	Standing Pilot and Improved Heat Exchanger.
Efficiency Level 3 (AFUE = 67)	Standing Pilot and Improved Heat Exchanger.
Efficiency Level 4 (AFUE = 68)	Standing Pilot and Improved Heat Exchanger.
Efficiency Level 5 – Max Tech (AFUE = 83)	Electronic Ignition and Multiple Heat Exchanger Design.

DOE did not analyze a gas hearth DHE product class separately in the preliminary analysis. Based upon public comment, for the NOPR analysis, DOE surveyed the residential gas hearth DHE market to identify technologies and efficiency levels common to gas hearth DHE. For gas hearth DHE, DOE identified products capable of condensing operations and rated at 93 AFUE as the max-tech level.

TABLE IV.20—GAS HEARTH DHE, OVER 27,000 BTU/H AND UP TO 46,000 BTU/H

Efficiency level (AFUE)	Technology
Baseline (AFUE = 64)	Standing Pilot.
Efficiency Level 1 (AFUE = 67)	Electronic Ignition.
Efficiency Level 2 (AFUE = 72)	Fan Assisted.
Efficiency Level 3 – Max Tech (AFUE = 93).	Condensing.

c. Pool Heaters

The baseline efficiencies for pool heaters were defined by the current Federal minimum energy conservation standards and the representative characteristics for products on the market that just meet Federal minimum energy conservation standards, as measured by thermal efficiency and effective on January 1, 1990. (10 CFR 430.32(k)) For pool heaters, the thermal efficiency corresponding to the baseline unit is 78 percent. *Id.*

DOE analyzed efficiency levels for pool heaters with standing pilot ignitions and pool heaters with electronic ignitions for the preliminary analysis. DOE distinguished between the two ignition systems because of the energy use difference between electronic ignition and standing pilot systems. The DOE test procedure does not fully include the energy use by a standing pilot systems in the thermal efficiency metric, but DOE accounted for the energy use difference between electronic ignition and standing pilot systems in its consumer LCC analysis. DOE did not receive any comments in response to the preliminary analysis that opposed this approach, and, therefore, DOE continues to use it for the NOPR analysis. After surveying the pool heater market, DOE determined that electronic ignition is offered in products covering the whole range of efficiencies, while standing pilot ignition systems are only offered in products corresponding to the first three intermediate efficiency levels. Consequently, DOE developed two baseline products and two efficiency pathways for efficiency levels 1 through 3.

For the NOPR analysis, DOE examined the same efficiency levels as it did in the preliminary analysis (see Table IV.21).

TABLE IV.21—GAS-FIRED POOL HEATER, 250,000 BTU/H

Efficiency level (thermal efficiency)	Technology
Baseline (Thermal Efficiency = 78)*	
Efficiency Level 1 (Thermal Efficiency = 79)*	Improved Heat Exchanger Design.
Efficiency Level 2 (Thermal Efficiency = 81)*	Improved Heat Exchanger Design.
Efficiency Level 3 (Thermal Efficiency = 82)*	Improved Heat Exchanger Design, More Effective Insulation (Combustion Chamber).
Efficiency Level 4 (Thermal Efficiency = 83)	Power Venting.
Efficiency Level 5 (Thermal Efficiency = 84)	Power Venting, Improved Heat Exchanger Design.
Efficiency Level 6 (Thermal Efficiency = 86)	Sealed Combustion, Improved Heat Exchanger Design.
Efficiency Level 7 (Thermal Efficiency = 90)	Sealed Combustion, Condensing.
Efficiency Level 8 – Max Tech (Thermal Efficiency = 95)	Sealed Combustion, Condensing, Improved Heat Exchanger Design.

*Technologies incorporating either a standing pilot or electronic ignition. Efficiency Levels above 3 include electronic ignition.

In the executive summary to the preliminary TSD, DOE sought comments on design changes manufacturers might use to mitigate the formation of corrosive condensation at 86 percent thermal efficiency for gas-fired pool heaters. DOE also sought comments on the changes manufacturers would make to the product design and the effects on MPC that would result if the amended energy conservation standards were at 86 percent thermal efficiency.

Raypak commented that Efficiency Level 6 (*i.e.,* 86 percent) requires sealed combustion, which will be a condensing system. (Raypak, Public Meeting Transcript, No. 34.4 at pp. 120–121) AHRI urged DOE to exclude near-condensing thermal efficiency levels from its analysis. AHRI pointed out that manufacturers would need to address a range of field installations and operating conditions if a minimum energy conservation standard level is set in the near-condensing range. (AHRI No. 43 at p. 5)

In response, DOE is aware of a pool heater model on the market at Efficiency Level 6. According to product literature, these models do not appear to incorporate condensate management. Therefore, DOE did not change the technology options at Efficiency Level 6 to represent a condensing pool heater. However, DOE's technology option for Efficiency Level 6 does include sealed combustion, as Raypak suggested.

4. Cost Assessment Methodology

At the start of the preliminary engineering analysis, DOE identified the energy efficiency levels associated with residential heating products on the market, as determined in the market assessment. DOE also identified the technologies and features that are typically incorporated into products at the baseline level and at the various energy efficiency levels above the baseline. Next, DOE selected products for the physical teardown analysis that corresponded to the representative rated storage volumes and input capacities. DOE gathered the information from the physical teardown analysis to create bills of materials using a reverse engineering methodology. After that, DOE used the physical teardown analysis to identify the design pathways manufacturers typically use to increase the EF of residential water heaters, the AFUE of residential DHE, or the thermal efficiency of residential pool heaters. DOE calculated the MPC for products spanning the full range of efficiencies from the baseline to the maximum technology available at various levels, and it also identified each technology or combination of technologies in each product that was responsible for improving the energy efficiency. DOE determined the cost-effectiveness of each technology by comparing the increase in MPC to the increase in energy efficiency. For the NOPR, DOE reexamined and revised several of the steps in its cost assessment methodology based on additional teardown analysis and in response to comments received on the preliminary analysis.

During the preparation and refining of the cost-efficiency comparison and MPCs for the NOPR, DOE also held interviews with manufacturers to gain insight into each of the water heating, direct heating, and pool heating industries and requested comments on the engineering approach DOE used. DOE used the information gathered from these interviews, along with the information gathered through additional teardown analysis and public comments, to refine efficiency levels and assumptions in the cost model. Next, DOE converted the MPCs into MSPs using publicly-available water heating, direct heating, and pool heating industry financial data, in addition to manufacturers' feedback. Further information on comments received and the revisions to the analysis methodology is presented in subsections a through g of this section. For

additional detail, see chapter 5 of the NOPR TSD.

a. Teardown Analysis

To assemble bill of materials (BOMs) and to calculate the manufacturing costs of the different components in residential heating products, DOE disassembled multiple residential heating products into their base components and estimated the materials, processes, and labor required for the manufacture of each individual component, a process referred to as a ''physical teardown.'' Using the data gathered from the physical teardowns, DOE characterized each component according to its weight, dimensions, material, quantity, and the manufacturing processes used to fabricate and assemble it. DOE also used a supplementary method, called a ''virtual teardown,'' which uses published manufacturer catalogs and supplementary component data to estimate the major physical differences between a product that was physically disassembled and a similar product that was not. For supplementary virtual teardowns, DOE gathered product data such as dimensions, weight, and design features from publicly-available information, such as manufacturer catalogs. DOE obtained information and data not typically found in catalogs and brochures, such as fan motor details, gas manifold specifications, or assembly details, from the physical teardowns of a similar product or through estimates based on industry knowledge. The teardown analysis for this engineering analysis included over 40 physical and virtual teardowns of water heaters, DHE, and pool heaters during the preliminary analysis and over 20 additional teardowns performed for the NOPR analysis. The additional teardowns performed for the NOPR analysis allowed DOE to further refine the product components and assumptions used to develop the MPCs.

The teardown analysis allowed DOE to identify the technologies that manufacturers typically incorporate into residential heating products, along with the efficiency levels associated with each technology or combination of technologies. DOE used the teardown analysis to create detailed BOMs for each product class. The BOMs from the teardown analysis were then placed into the cost model to calculate the MPC for the representative product in each product class. See chapter 5 of the NOPR TSD for more details on the teardown analysis.

b. Cost Model

The end result of each teardown is a structured BOMs. DOE developed structured BOMs for each of the physical and virtual teardowns. The BOMs incorporate all materials, components, and fasteners classified as either raw materials or purchased parts and assemblies, and characterize the materials and components by weight, manufacturing processes used, dimensions, material, and quantity. The cost model is a Microsoft Excel spreadsheet that converts the materials and components in the BOMs into dollar values based on the price of materials, labor rates associated with manufacturing and assembling, and the cost of overhead and depreciation. To convert the information in the BOMs to dollar values for the preliminary analysis, DOE collected information on labor rates, tooling costs, raw material prices, and other factors. For purchased parts, the cost model estimates the purchase price based on volume-variable price quotations and detailed discussions with manufacturers and component suppliers. For fabricated parts, the prices of raw metal materials (*e.g.*, tube, sheet metal) are estimated on the basis of 5-year averages. The cost of transforming the intermediate materials into finished parts is estimated based on current industry pricing. For the NOPR analysis, DOE updated all of the labor rates, tooling costs, raw material prices, the costs of resins, and the purchased parts costs. Chapter 5 of the NOPR TSD describes DOE's cost model and definitions, assumptions, and estimates.

DOE received several comments on the material prices collected for use in the cost model, as discussed below.

Bock commented that manufacturer production costs were calculated approximately 2 years before the public meeting for the preliminary analysis. Bock noted that the price of steel has increased tremendously and that DOE should recalculate these costs. (Bock, Public Meeting Transcript, No. 34.4 at p. 27) In written comments, Bock reiterated that because material prices, particularly for steel, have increased significantly since DOE completed its analysis, DOE's estimated manufacturer production costs and selling prices should be adjusted to reflect this trend. (Bock, No. 53 at p. 1)

In contrast, ACEEE commented that DOE significantly overestimated the cost of compliance with amended standards to the consumer. ACEEE stated that this was due to the effects of changing material prices on products and suggested that it would be appropriate for DOE to review past rulemakings to determine the accuracy of DOE's analytical approaches. (ACEEE, Public Meeting Transcript, No. 34.4 at pp. 81–82) Southern Company disagreed with ACEEE regarding the cost to the consumer and referenced the most recent residential air conditioner rulemaking which was done when commodity prices were depressed. Southern stated that because of the depressed commodity prices, the actual costs were higher than DOE's projections. (Southern, Public Meeting Transcript, No. 34.4 at p. 82) Further, Southern commented that a 5-year rolling average of commodity prices would be appropriate for this rulemaking. (Southern, Public Meeting Transcript, No. 34.4 at p. 83) Rheem agreed with Southern regarding commodity prices. Regarding the residential central air conditioner rulemaking, Rheem stated that the results were devastating to the industry and domestic manufacturers, and the company urged DOE to be very careful in estimating the cost to consumers because of the potential for a significantly adverse impact on domestic manufacturing jobs. (Rheem, Public Meeting Transcript, No. 34.4 at pp. 83–84) In its written comments, Rheem noted that manufacturer production costs were derived from material prices that were based on 5-year averages from 2003 to 2007. Rheem urged DOE to revise material prices due to their drastic increases and volatility driven by global demand. (Rheem, No. 49 at pp. 2–3) A.O. Smith agreed that using material prices from 2003 through 2007 to determine a normalized average may be understating actual prices, which continued to fluctuate but generally increased in 2008. (A.O. Smith, No. 37 at p. 4)

Because all interested parties agreed with DOE's approach to use 5-year rolling average material prices in the engineering analysis, DOE used the same approach in the NOPR analysis. DOE acknowledges Bock's, Rheem's, and A.O. Smith's concerns about the timing of the production cost calculations because the majority of manufacturer production cost can typically be attributed to materials, which can fluctuate greatly from year to year. DOE uses a 5-year span to normalize the fluctuating prices experienced in the metal commodities markets to screen out temporary dips or spikes. DOE believes a 5-year span is the longest span that would still provide appropriate weighting to current prices experienced in the market. DOE updates the 5-year span for metal prices based on a review of updated commodity

pricing data, which point to continued increases. Considering the significant amount of steel and copper in the different heating products at issue in this rulemaking, incorporating commodity prices that reflect 5-year average prices as close to current conditions would best reflect overall market conditions. Consequently, DOE calculated a new 5-year average materials price using the U.S. Department of Labor's Bureau of Labor Statistics (BLS) Producer Price Indices (PPIs) for various raw metal materials from 2005 to 2009 to calculate new averages, which incorporate the changes within each material industry and inflation. DOE also used BLS PPI data to update current market pricing for other input materials such as plastic resins and purchased parts. Finally, DOE adjusted all averages to 2008$ using the gross domestic product implicit price deflator.

c. Manufacturing Production Cost

Once the cost estimate for each teardown unit was finalized, DOE totaled the cost of materials, labor, and direct overhead used to manufacture a product in order to calculate the manufacturer production cost for the preliminary analysis. The total cost of the product was broken down into two main costs: (1) The full manufacturer production cost or MPC; and (2) the non-production cost, which includes selling, general, and administration (SG&A) costs, the cost of research and development, and interest. DOE estimates the MPC at each efficiency level considered for each product class, from the baseline through the max-tech. After DOE incorporates all of the assumptions into the cost model, DOE calculates the different percentages of each aspect of production cost (*i.e.* materials, labor, depreciation, and overhead) that make up the total production cost. The product cost percentages are used to validate the assumptions by comparing them to manufacturers' actual financial data published in annual reports, along with feedback from manufacturers during interviews. DOE uses these production cost percentages in the MIA (see section IV.H).

For the NOPR analysis, DOE revised the assumptions in the cost model based on additional teardown analysis, updated pricing, and additional manufacturer feedback, which resulted in revised MPCs and production cost percentages. DOE calculated the average product cost percentages by product type (*i.e.*, water heater, DHE, pool heater) as well as by product class (*e.g.*, gas-fired storage water heater, electric storage water heater) due to the large variations in production volumes, fabrication and assembly costs, and other assumptions that affect the calculation of the unit's total MPC. Chapter 5 of the NOPR TSD shows DOE's estimate of the MPCs for the NOPR phase of this rulemaking, along with the different percentages for each aspect of the production costs that make up the total product MPC.

DOE received various comments in response to the MPCs presented in its preliminary analysis, as discussed below.

For pool heaters, Raypak stated that the cost difference between the ignition systems of gas-fired pool heaters should be more than $3, because the electronic ignition controls cost more than $3. Raypak also commented that the materials used for Efficiency Level 6 must be suitable for condensing applications, which means that DOE's estimate for MPC for Efficiency Level 6 is understated. (Raypak, Public Meeting Transcript, No. 34.4 at pp. 120–121)

In response, DOE revised all of the MPCs for residential heating products for the NOPR analyses. In the case of pool heaters, DOE reexamined the component cost assumptions for electronic ignitions and revised the estimate of the cost to implement an electronic ignition design. The revised cost assumptions for an electronic ignition are documented in chapter 5 of the NOPR TSD. DOE also revised the costs for Efficiency Level 6, but did not consider the costs associated with condensate management at that efficiency level. Some residential pool heater designs currently on the market do not appear to accommodate condensing operations at 86 percent thermal efficiency, thereby suggesting that such costs need not be incurred to reach that efficiency level. Therefore, DOE did not account for condensate management in the cost of products at Efficiency Level 6.

Regarding gas-fired storage water heaters, Rheem stated that the MPC and MSP for Efficiency Level 6 should be higher. (Rheem, No. 49 at p. 4) A.O. Smith asserted that the estimated manufacturer production costs in DOE's preliminary analysis are too low for max-tech water heaters (*i.e.*, heat pump water heaters and condensing gas-fired water heaters). (A.O. Smith, No. 37 at p. 4) Additionally, A.O. Smith stated that the baseline MPCs are approximately 11 percent low for gas-fired storage water heaters and 13 percent low for electric storage water heaters. (A.O. Smith, No. 37 at p. 6)

On this point, DOE has revised its cost estimates for storage water heaters at all levels, including the baseline and the max-tech efficiency levels based on manufacturer feedback obtained during interviews performed for the MIA (see section IV.H.4). The resulting cost estimates for the NOPR analysis are higher than in the preliminary analysis. Chapter 5 of the NOPR TSD discusses DOE's cost estimates for max-tech storage water heaters.

BWC commented that the energy factor for condensing gas-fired storage water heaters (the max-tech level) was based on models on the market that are not classified as residential water heaters. BWC stated that it is unfair to use non-residential models to determine the cost of condensing water heaters, because non-residential models do not include components and the associated costs to make them compliant with other regulations, such as FVIR and ultra-low NO_X requirements. (BWC, No. 46 at p. 2).

For DOE's estimate of the manufacturing cost of condensing gas-fired storage water heaters, DOE did include the additional cost of FVIR in both the preliminary and NOPR analyses, which is not found in commercial water heaters currently on the market. DOE also based its condensing water heater design on one that would be more typical of residential applications (*i.e.*, 40-gallon storage volume and 40,000 Btu/h input capacity). In addition, DOE developed separate manufacturer production costs for gas-fired storage water heaters with standard burners and for gas-fired storage water heaters with ultra-low NO_X burners (section IV.C.2), including those gas-fired water heaters that would have been at the max-tech efficiency level.

d. Cost-Efficiency Curves

The result of the engineering analysis is a set of cost-efficiency curves. DOE created 11 curves representing each product class examined for this NOPR. For storage water heaters, the cost-efficiency curves show the representative rated storage volumes in addition to the other storage volumes analyzed.

Chapter 5 of the NOPR TSD contains the 11 cost-efficiency curves in the form of energy efficiency (*i.e.*, EF, AFUE, or thermal efficiency) versus MPC. The results show that the cost-efficiency curves are nonlinear. As efficiency increases, manufacturing becomes more difficult and more costly. Large jumps are evident when efficiencies approach levels where electronic ignition, blower motors, power vent, and condensing operation are included in designs. Additionally, MPC increases greatly

when heat pump technology is used as an alternative to resistive heating for electric storage water heaters.

The non-linear relationship is common across all product types. In addition, DHE and high-efficiency pool heaters see larger increases in MPC due to lower production volumes than water heaters.

In response to the cost-efficiency curves developed for the preliminary analysis, ACEEE asserted that DOE's cost-efficiency relationship ignores the potential ''learning-by-doing'' effects that have driven down the costs of technologies for almost all regulated goods. The commenter argued that more stringent standards lead to product redesigns that almost inevitably result in lower consumer prices for more-efficient goods after the amended standards have become effective. ACEEE recommended that DOE balance the current cost-efficiency development approach with the historical results of rulemakings on manufacturer production costs. (ACEEE, No. 35 at p. 5)

Similarly, NRDC questioned DOE predictions that more-efficient products result in escalating costs and stated that DOE should re-analyze these projections. NRDC also commented that this rulemaking addresses products previously covered and analyzed in other rulemakings, and asserted that DOE should evaluate previous analyses by reviewing its predictions versus the realized effects of standards so that costs are not overestimated for this rulemaking. NRDC stated that an overestimation of the cost to improve efficiency could cause DOE to set standards below the levels that would be justified if DOE were to determine costs by more accurate methods, a result which would fail to meet the requirements of the statute. (NRDC, No. 48 at p. 4)

DOE does not agree with ACEEE or NRDC for the following reasons. DOE recognizes that every change in minimum energy conservation standards is an opportunity for manufacturers to make investments beyond what would be required to meet the new standards in order to minimize costs or to respond to other factors. However, DOE's manufacturing cost estimates seek to gauge the most likely industry response to meet the requirements of proposed energy conservation standards. DOE's analysis of manufacturing cost must be based on currently-available technology that would provide a nonproprietary pathway for compliance with a standard once it becomes effective, and, thus, DOE cannot speculate on future product and market innovation. In response to a change in energy conservation standards, manufacturers have made a number of changes to reduce costs in the past. For example, DOE understands manufacturers have re-engineered products to reduce cost, made changes to manufacturing process to reduce labor costs, and moved production to lower-cost areas to reduce labor costs. However, these are individual company decisions, and it is impossible for DOE to forecast such decisions. DOE does not know of any data that would allow it to determine the precise course a manufacturer may take. Furthermore, while manufacturers have been able to reduce the cost of products that meet previous energy conservation standards, there are no data to suggest that any further reductions in cost are possible. Therefore, it would not be appropriate to speculate about cost reduction based upon prior actions of manufacturers of either the same or other products. Setting energy conservation standards upon relevant data is particularly important given EPCA's anti-backsliding provision at 42 U.S.C. 6295(o)(1).

e. Manufacturer Markup

DOE applies a non-production cost multiplier (the manufacturer markup) to the full MPC to account for corporate non-production costs and profit. The resulting manufacturer selling price is the price at which the manufacturer can recover all production and non-production costs and earn a profit. To meet new or amended energy conservation standards, manufacturers often introduce design changes to their product lines that result in increased manufacturer production costs. Depending on the competitive environment for these particular products, some or all of the increased production costs may be passed from manufacturers to retailers and eventually to customers in the form of higher purchase prices. As production costs increase, manufacturers typically incur additional overhead. The MSP should be high enough to recover the full cost of the product (*i.e.*, full production and non-production costs), and yield a profit. The manufacturer markup has an important bearing on profitability. A high markup under a standards scenario suggests manufacturers can pass through the increased variable costs and some of the capital and product conversion costs (the one-time expenditures). A low markup suggests that manufacturers will not be able to recover as much of the necessary investment in plant and equipment.

To calculate the manufacturer markups for the preliminary analysis, DOE used 10–K reports from publicly-owned residential heating products companies. (SEC 10–K reports can be found using the search database at: *http://www.sec.gov/edgar/searchedgar/webusers.htm*.) The financial figures necessary for calculating the manufacturer markup are net sales, costs of sales, and gross profit. For the preliminary analysis, DOE averaged the financial figures spanning 2000 to 2006 and then calculated the markups. For the NOPR analysis, DOE updated the financial figures using 10–K reports spanning 2003 to 2008. To calculate the time-average gross profit margin for each firm, DOE summed the gross profit for all the years and then divided the result by the sum of the net sales for those years. DOE presented the calculated markups to manufacturers during the interviews for the NOPR (see section IV.H.4). DOE considered the feedback from manufacturers in order to supplement the calculated markup, and refined the markup to better reflect the residential heating products market. DOE developed the manufacturer markup by weighting the feedback from manufacturers on a market share basis, since manufacturers with larger market shares more accurately represent a greater portion of the market. DOE used a constant markup to reflect the MSPs of the baseline products as well as more-efficient products. DOE took this approach because amended standards may make high-efficiency products, which currently are considered premium products, and make them the baselines. See chapter 5 of the NOPR TSD for more details about the markup calculation.

In response to the preliminary analysis, Bock commented on the MPC and MSP for oil-fired storage water heaters at Efficiency Level 6. Bock stated that the MPC is reasonable in terms of considering increased material costs, but that the MSP is much too low (implying that DOE's markup for oil-fired storage water heaters is too low). The commenter stated that the distribution chain is flawed for some manufacturers and that, unlike gas-fired and electric storage water heaters, oil-fired storage water heaters require an oil burner that adds approximately $400 to the MSP. Based upon the above reasoning, Bock stated that the MSP for Efficiency Level 6 is approximately $1,400. (Bock, No. 53 at p. 1)

The MSP, as defined by DOE, is the selling price from the manufacturer to the first step in its distribution chain (*e.g.*, a wholesaler, a distributor, or a national retailer). The MSP does not

include any further markups for the rest of the distribution chain, but the MPC for oil-fired storage water heaters includes the price of the burner. Therefore, the MSP as defined by DOE can be significantly lower than the purchase price for an end-consumer, which is what DOE believes Bock is referring to. The purchase price would depend on the typical markups in each step of the distribution chain as well as the number of layers of distribution the product has to clear before reaching the end-consumer. Section IV.D of this notice describes the distribution chain markups in further detail.

f. Shipping Costs

For the preliminary analysis, DOE accounted for the shipping costs for residential heating products as part of the non-production costs that comprise the manufacturer markup. This approach is typical of energy conservation standards rulemakings for residential products.

Following the preliminary analysis, DOE received several comments about the impact of an amended energy conservation standard on shipping (*i.e.*, freight) costs for storage water heaters. A.O. Smith commented that freight is not a manufacturing cost, but it is a substantial cost incurred for water heaters, especially tank-type models. Water heater manufacturers generally pay for shipping to most customers; therefore, this cost is added in the manufacturer's gross margin calculation. A.O. Smith noted that an increase in water heater size will add cost to the overall manufacture/purchase transition. (A.O. Smith, No. 37 at p. 4) Similarly, BWC commented that DOE underestimated the increase in freight costs as overall dimensions increase when larger cavity sizes are used. (BWC, No. 46 at p. 2).

Although the non-production costs typically account for freight in the manufacturer markup, DOE responded to these comments by separating the shipping costs from the markup multiplier for storage water heaters for the NOPR analysis in order to make the MSP calculation more transparent. DOE calculated the MSP for storage water heaters by multiplying the MPC determined from the cost model by the manufacturer markup and adding shipping costs. More specifically, DOE calculated shipping costs based on a typical 53-foot straight frame trailer with a storage volume of 4,240 cubic feet. DOE examined the average sizes of representative water heaters and determined the number of units that would fit in each trailer, based on assumptions about the arrangement of water heaters in the trailer. Finally, DOE calculated the average cost for each unit shipped based on an average cost of $4,000 per trailer load. See chapter 5 of the NOPR TSD for more details about DOE's shipping cost assumptions and the shipping costs per unit for each storage water heater product class.

g. Manufacturer Interviews

Throughout the rulemaking process, DOE seeks feedback and insight from interested parties to improve the information used in its analyses. DOE interviewed manufacturers as a part of the NOPR manufacturer impact analysis (see section IV.H.4). During the interviews, DOE sought feedback on all aspects of its analyses for residential heating products. For the engineering analysis, DOE discussed the analytical assumptions and estimates, cost model, and cost-efficiency curves with manufacturers of water heaters, DHE, and pool heaters. DOE considered all the information manufacturers provided when refining the cost model and assumptions. DOE incorporated equipment and manufacturing process figures into the analysis as averages to avoid disclosing sensitive information about individual manufacturers' products or manufacturing processes. More details about the manufacturer interviews are contained in chapter 12 of the NOPR TSD. The interview guides DOE distributed to manufacturers are contained in appendix 12–A of the NOPR TSD.

5. Results

The results from the engineering analysis were used in the LCC analysis to determine consumer prices for residential heating products at the various potential standard levels. Using the manufacturer markup, DOE calculated the MSPs of the representative water heaters, DHE, and pool heater from the MPCs developed using the cost model. Chapter 5 of the NOPR TSD provides the full list of MPCs and MSPs at each efficiency level for each analyzed representative product.

6. Scaling to Additional Rated Storage Capacities for Water Heaters

To account for the large variation in the rated storage volumes of residential storage water heaters and differences in both usage patterns and first cost to consumers of water heaters larger or smaller than the representative capacity, DOE scaled its MPCs and efficiency levels at the representative capacities to several discrete rated storage volumes at capacities higher and lower than the representative storage volume for each storage water heater product class. DOE developed the MPCs for water heaters at each of the rated storage volumes shown in Table IV.22. These storage volumes were determined to be the most prevalent storage volumes available on the market during the market analysis (see Chapter 3 of the TSD). The MPCs developed for this analysis were used in the downstream LCC analysis, where a distribution of MPCs was used based on the estimated market share of each rated storage volume (see Section IV.E).

TABLE IV.22—ADDITIONAL WATER HEATER STORAGE VOLUMES ANALYZED

Water heater product class	Storage volumes analyzed (gallons, U.S.)
Gas-fired Storage	30, 50, 65, 75.
Electric Storage	30, 40, 66, 80, 119.
Oil-fired Storage	50.

To develop the MPCs for the analysis of additional storage volumes, DOE developed a cost model based on teardowns of representative units from a range of nominal capacities and multiple manufacturers. Whenever possible, DOE maintained the same product line that was used for the teardown at the representative storage volume to allow for a direct comparison between models at the representative storage volume and models at higher and lower storage volumes. The cost model accounts for changes in the size of water heater components that would scale with tank volume (*e.g.*, tank dimensions, wrapper dimensions, wall thicknesses, insulation thickness, anode

rod(s), flue pipe(s)). Components that typically do not change based on tank volume (*e.g.*, gas valves, thermostats, controls) were assumed to remain largely the same across the different storage volume sizes, while accounting for price differences due to changes in insulation thickness. DOE estimated the changes in material and labor costs that occur at volume sizes higher and lower than the representative capacity based on observations made during teardowns and professional experience. Performing teardowns of models outside of the representative capacity allowed DOE to accurately model certain characteristics (such as tank wall thickness and wrapper thickness) that are not identifiable in manufacturer literature.

While DOE was able to receive feedback from manufacturers regarding the manufacturing costs of storage water heaters at representative storage capacities, DOE was unable to solicit manufacturing cost feedback from manufacturers regarding the additional water heaters shown above. However, DOE was able to finely tune the performance of the cost model to accurately predict the weights of non-representative units via the additional teardowns. For example, DOE observed that the tank wall thickness increases as a function of tank diameter. Based on the feedback received from manufacturers for representative units and the accuracy of the material predictions for non-representative units, DOE believes that its scaling is accurate. In addition to comparing model output to actual teardowns, model outputs were also compared to published catalog data.

The results of DOE's analysis for the additional storage volumes are presented in chapter 5 of the NOPR TSD (engineering analysis). Chapter 5 of the NOPR TSD also contains additional details about the calculation of MPCs for storage volumes outside of the representative capacity. DOE is seeking comment its MPC estimates at the additional storage volumes outside of the representative storage volumes, as well as on its approach to developing these MPCs. (See issue number 12 under Section VII.E ''Issues on Which DOE Seeks Comment'').

7. Energy Efficiency Equations

As part of the engineering analysis for residential water heaters, DOE reviewed the energy efficiency equations that define the existing Federal energy conservation standards for gas-fired and electric storage water heaters. The energy efficiency equations allow DOE to expand the analysis on the representative rated storage volume to the full range of storage volumes covered under the existing Federal energy conservation standards.

DOE uses energy efficiency equations to characterize the relationship between rated storage volume and energy factor. The energy efficiency equations allow DOE to account for the increases in standby losses as tank volume increases. As the tank storage volume increases, the tank surface area increases. The larger surface area results in higher heat transfer rates that result in higher jacket losses. Other losses to consider are the feed-through losses and flue losses (for gas-fired water heaters). The current energy efficiency equations show that for each water heater class, the minimum energy factor decreases as the rated storage volume increases.

After reviewing market data and product literature for gas-fired and electric storage water heaters, DOE presented two approaches for amending the existing energy efficiency equations for storage water heaters. One approach was to maintain the same slope used in the existing equations, but to incrementally increase the intercepts. This created energy efficiency equations with the same slope to define EF across the entire range of storage volumes for each efficiency level. The advantage of this approach would be to maintain the same slopes established in NAECA and used in the 2001 rulemaking, which have historically characterized the water heater market.

A second approach was to adjust the slope of the energy efficiency equations based on the review of the storage water heater models currently on the market. The advantage of this approach is the acknowledge the changes in the product efficiencies offered over time and account for these changes. DOE examined the efficiencies of models with varying storage volumes, but with the same or similar design features. DOE varied the slope of the line to maximize the number of models in the series that meet the efficiency levels DOE is considering in the full range of rated storage volumes. DOE sought comments on approaches to develop the energy efficiency equations for all storage volumes and all efficiency levels of gas-fired and electric storage water heaters. Specifically, DOE sought comment on an alternative approach based on model series that incorporate current market data from AHRI's Consumers' Directory to generate revised equation slopes that minimize the number of models that would become obsolete. DOE received feedback from several interested parties, as discussed immediately below.

ACEEE commented that the alternative energy efficiency equations appear to relax the energy factor requirements for smaller capacity water heaters while making the energy factor requirements more stringent for larger capacity water heaters. (ACEEE, Public Meeting Transcript, No. 34.4 at p. 100) AHRI stated that there are more options for saving energy at higher capacities. AHRI further stated that additional energy may be saved by using an alternative energy efficiency equation and that there may be two equations that define the energy conservation standard across the range of rated volumes. (AHRI, Public Meeting Transcript, No. 34.4 at pp. 101–102) Rheem argued that size constraints must be considered when determining alternative energy efficiency equations and efficiency levels for replacement water heaters. Rheem stated that there are certain doorways and attics where installations will not be possible due to size constraints. (Rheem, Public Meeting Transcript, No. 34.4 at p. 104)

Rheem expressed concern that changes to the energy efficiency equations may result in the elimination of certain capacities. However, Rheem stated that the current slope is inappropriate as it would set unattainable levels for small and large capacity water heaters. Rheem commented that the proposed alternative equations disproportionately affect gas-fired storage water heaters, especially large-storage-volume products. In sum, Rheem recommended that DOE should revisit the current equations to determine whether energy factors across the full range of rated storage volumes are still appropriate. (Rheem, No. 49 at p. 6)

EEI expressed support for DOE's decision to update the energy efficiency equations for storage-type water heaters. However, EEI cautioned DOE to avoid eliminating certain storage volumes from the market. Therefore, EEI suggested that DOE develop a two-slope approach for smaller and larger water heaters to ensure competition in the marketplace. (EEI, No. 40 at p. 4)

In response, DOE agrees that the alternative slopes examined at each efficiency level for the preliminary analysis were not as stringent for the lower storage volume models and were more stringent for higher storage volume models when compared to the slope defining existing standards. DOE presented such slopes because many models at lower storage volumes have already reached close to the maximum possible efficiency with conventional technologies, while there is more potential for increased energy efficiency for models with larger storage volumes. However, DOE also notes that this

increased stringency may discourage manufacturers from continuing to develop larger storage volume models. To attempt to mitigate these issues, DOE is proposing ''two-slope'' energy efficiency equations to better define the relationship between storage volume and energy factor across the range of covered storage volumes.

ACEEE stated its support for modifying the energy efficiency equations for electric and gas-fired storage water heaters if the effect would be to increase the EF for larger units (*i.e.*, those units with a higher rated storage volume). For electric storage water heaters, ACEEE supported capping the EF requirement at 0.95, even for the smaller rated storage types. (ACEEE, No. 35 at p. 6) NEEA and NPCC agreed with DOE's intention to adjust the slopes of the energy efficiency equations for gas-fired and electric storage water heaters. Specifically, NEEA and NPCC stated their support for the recommended approach by fitting the energy efficiency equations to actual product lines on the market. NEEA and NPCC recommended a further lessening of the slope than the examples shown in the preliminary analysis to preserve at least one model offered on the current market over the range of storage volumes. (NEEA and NPCC, No. 42 at p. 6) BWC commented that the energy efficiency equations for water heaters should be changed, arguing that as amended standards increase energy efficiency, it becomes increasingly difficult for units with larger gallon capacities to comply. (BWC, No. 46 at p. 1)

In contrast, A.O. Smith stated that the existing energy efficiency equations should not be changed. While A.O. Smith acknowledged some of the points DOE made in the preliminary analyses regarding the existing energy efficiency equations, A.O. Smith stated it would take a much more detailed investigation than DOE has used to validate the points raised. (A.O. Smith, No. 37 at p. 8)

While DOE acknowledges that A.O. Smith does not support changing the energy-efficiency equations for gas-fired and electric storage water heaters, DOE believes that the slopes of the energy efficiency equations can be revised to more accurately characterize the relationship between storage volume and energy factor for the current storage water heater market.

For this NOPR, DOE reviewed AHRI's March 2009 Consumers' Directory and developed a database of products that includes all gas-fired and electric storage water heater models subject to this rulemaking. DOE also reviewed manufacturers' catalogs to gather information on the design characteristics of each water heater model. The manufacturers' catalogs include information on efficiency ratings, product series descriptions, jacket insulation thicknesses, ignition types, and drafting methods (*i.e.*, natural or power vented drafting). To further investigate the relationship between EF and rated storage volume, DOE conducted testing according to the water heater test procedure specified in 10 CFR 430, subpart B, appendix E (the same test procedure manufacturers use to certify products in AHRI's Consumers' Directory) to verify the EF values. DOE tested model series with similar design characteristics and volumetric designs to isolate how EF changes with rated storage volume. DOE performed this testing for a number of model series at various efficiencies and for a variety of manufacturers. DOE chose models to test by selecting product series from multiple major manufacturers that span the range of rated volumes within each product class and that span the range of efficiency levels. After completion of testing, DOE conducted a teardown analysis of the tested models and confirmed the specific technologies that affect energy efficiency and the volumetric characteristics of the tank. DOE used the results of this analysis to adjust the energy efficiency equations.

Using the information gathered from product catalogs, independent testing results, and product teardowns, DOE developed an alternative approach for revising the energy efficiency equations based on three constraints. DOE applied the following constraining criteria to the development process:

- For gas-fired water heaters, each energy efficiency equation must include units with the specified efficiency level at 40-gallon rated storage volume.
- For electric storage water heaters, each energy efficiency equation must include units with the specified efficiency level at 50-gallon rated storage volume.
- The energy efficiency equations cannot result in a standard that falls below current standards over the entire rated volume range.

DOE chose this approach because it takes into account the models currently on the market, considers the technologies incorporated into those models, and attempts to optimize the number of models across the entire rated volume range that would meet the efficiency levels DOE is considering. The approach also attempts to minimize the number of models that would be eliminated from the market by the efficiency levels DOE is considering across the entire range of storage volumes.

In examining the market data to develop the energy efficiency equations, DOE noted a trend of greater decline in energy efficiency at higher rated storage volumes than at lower storage volumes. As a result, DOE developed energy efficiency equations with varying slopes at several of the efficiency levels analyzed for the NOPR analysis. These equations maintain one slope from the minimum covered rated storage volume up to a certain rated storage volume (*i.e.*, 60 gallons for gas-fired storage water heaters and 80 gallons for electric storage water heaters), and then maintain a different slope over the remaining range of covered storage volumes. DOE selected 60-gallon and 80-gallon storage volumes as the point where the change in slope of the energy efficiency equations for gas-fired and electric storage water heaters, respectively, should occur, because the market data suggested a natural break in the available products at those points. Models with gallon sizes above 60 gallons for gas-fired units and 80 gallons for electric units typically experienced reduced efficiencies more rapidly as a function of increasing storage volume, as compared to units with lower volume sizes. The higher ends of the residential storage capacities also have a lower volume of shipments.

Based upon the above approach, for gas-fired storage water heaters, DOE did not change the slope of the energy efficiency equation for storage volumes above 60 gallons across efficiency levels (*i.e.*, DOE kept the same slope above 60 gallons at each efficiency level). Few gas-fired storage water heaters exist with storage volumes greater than 60 gallons, and, therefore, the market data were very limited. Due to the lack of data for the efficiency at larger gas-fired water heater storage volumes, DOE used the slope defining the current standard for residential gas-fired storage water heaters, as listed in DOE's regulations at 10 CFR 430.32(d). In other words, DOE maintained the same slope for Efficiency Level 1 through Efficiency Level 5 for gas-fired storage water heaters above 60 gallons.

For the max-tech efficiency levels considered for gas-fired storage water heaters and electric storage water heaters, DOE also did not change the slope of the energy efficiency equations. Because there are no products currently available on the market meeting the max-tech efficiency levels, DOE could not perform an analysis or come to any definitive conclusion about the effect of storage volume on energy factor at these

efficiency levels. However, DOE does recognize that with any storage water heater, the standby losses will increase with storage volume due to increased tank surface area. Because there is no data that DOE can use to make a determination of an appropriate slope at these levels, DOE maintained the relationship between storage volume and energy factor developed previously for water heaters. Therefore, the energy efficiency equations for the max-tech levels exhibit the same slopes used for the gas-fired storage water heater and electric storage water heaters in the current energy conservation standards at 10 CFR 430.32(d). Table IV.23 and Table IV.24 show the energy efficiency equations developed for the NOPR for gas-fired and electric storage water heaters, respectively.

TABLE IV.23—NOPR ENERGY EFFICIENCY EQUATIONS FOR GAS STORAGE WATER HEATERS

Efficiency level	20 to 60 gallons	Over 60 and up to 100 gallons
Baseline Energy Efficiency Equation	$EF = -0.00190(V_R) + 0.670$	$EF = -0.00190(V_R) + 0.670$.
EL 1 Energy Efficiency Equation	$EF = -0.00150(V_R) + 0.675$	$EF = -0.00190(V_R) + 0.699$.
EL 2 Energy Efficiency Equation	$EF = -0.00120(V_R) + 0.675$	$EF = -0.00190(V_R) + 0.717$.
EL 3 Energy Efficiency Equation	$EF = -0.00100(V_R) + 0.680$	$EF = -0.00190(V_R) + 0.734$.
EL 4 Energy Efficiency Equation	$EF = -0.00090(V_R) + 0.690$	$EF = -0.00190(V_R) + 0.750$.
EL 5 Energy Efficiency Equation	$EF = -0.00078(V_R) + 0.700$	$EF = -0.00190(V_R) + 0.767$.
EL 6 Energy Efficiency Equation	$EF = -0.00078(V_R) + 0.8312$	$EF = -0.00078(V_R) + 0.8312$.

TABLE IV.24—NOPR ENERGY EFFICIENCY EQUATIONS FOR ELECTRIC STORAGE WATER HEATERS

Efficiency level	20 to 80 gallons	Over 80 and up to 120 gallons
Baseline Energy Efficiency Equation	$EF = -0.00132(V_R) + 0.97$	$EF = -0.00132(V_R) + 0.97$.
EL 1 Energy Efficiency Equation	$EF = -0.00113(V_R) + 0.97$	$EF = -0.00149(V_R) + 0.999$.
EL 2 Energy Efficiency Equation	$EF = -0.00095(V_R) + 0.967$	$EF = -0.00153(V_R) + 1.013$.
EL 3 Energy Efficiency Equation	$EF = -0.00080(V_R) + 0.966$	$EF = -0.00155(V_R) + 1.026$.
EL 4 Energy Efficiency Equation	$EF = -0.00060(V_R) + 0.965$	$EF = -0.00168(V_R) + 1.051$.
EL 5 Energy Efficiency Equation	$EF = -0.00030(V_R) + 0.960$	$EF = -0.00190(V_R) + 1.088$.
EL 6 Energy Efficiency Equation	$EF = -0.00113(V_R) + 2.057$	$EF = -0.00113(V_R) + 2.057$.
EL 7 Energy Efficiency Equation	$EF = -0.00113(V_R) + 2.257$	$EF = -0.00113(V_R) + 2.257$.

DOE seeks comment on the energy efficiency equations for gas-fired and electric storage water heaters developed for the NOPR. In particular, DOE seeks comment on its approach to developing the energy efficiency equations, the appropriate slope of energy efficiency equations at each efficiency level analyzed, and the appropriate storage volumes for changing the slope of the line. DOE is also interested in alternatives to the energy efficiency equations that DOE should consider for the final rule. (See Issue 7 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

There are very few models of oil-fired storage water heaters on the market. The lack of data to correlate storage volume and energy factor for oil-fired water heaters makes it difficult for DOE to conclude that an alternative approach is needed for the energy efficiency equations. In the preliminary analysis, DOE presented energy efficiency equations for oil-fired storage water heaters that were developed by maintaining the same slope used in the existing Federal requirements found in 10 CFR 430.32(d). DOE did not present any alternative method to establishing energy efficiency equations for oil-fired storage water heaters.

In response, AHRI stated its support for using the current energy efficiency equations for oil-fired storage water heaters. (AHRI, No. 43 at p. 5)

Because DOE did not receive any comments in opposition to using the same slopes for oil-fired storage water heaters that currently define the existing Federal standards, DOE is continuing to use the same methodology for the NOPR.

AHRI also recommended that DOE remove the volume adjustment term from the energy efficiency equations for gas-fired instantaneous water heaters and specify a minimum EF applicable to all sizes of residential instantaneous water heaters. (AHRI, No. 43 at p. 5) Additionally, A.O. Smith stated that because gas-fired instantaneous water heaters have no volume correction, an EF level for all sizes would be appropriate. (A.O. Smith, No. 37 at p. 7)

DOE acknowledges that nearly all are rated at 0 gallons of storage volume. Because the volume adjustment term is multiplied by storage volume, this will by default eliminate the volume adjustment term from the energy efficiency equation used for gas-fired instantaneous water heaters with a rated storage volume of 0 gallons. However, by definition, gas-fired instantaneous water heaters may have a rated storage volume of up to 2 gallons. Therefore, DOE is proposing to maintain the volume adjustment factor for consistency with the other energy-efficiency equations.

See chapter 5 of the NOPR TSD for additional information about the energy efficiency equations for residential water heaters.

D. Markups To Determine Product Price

By applying markups to the manufacturer selling prices estimated in the engineering analysis, DOE estimated the amounts consumers would pay for baseline and more-efficient products. At each step in the distribution channel, companies mark up the price of the product to cover business costs and profit margin. The appropriate markups for determining the consumer product price depend, therefore, on the type of distribution channels through which products move from manufacturer to consumer.

Bock stated that DOE needs to consider that manufacturers sell to their representatives, who sell water heaters to distributors. (Bock, No. 53 at p. 2) DOE's information indicates that manufacturer representatives work on commission to facilitate sales from manufacturers to both distributors and retailers, but they do not mark up the products. The commission is part of the manufacturers' costs.

The distribution channel for water heaters differs for replacement versus new applications, resulting in different

markups. For replacement applications, manufacturers sell to either plumbing distributors or large retail outlets (typically large home-supply stores). Products destined for replacement applications follow one of two paths: (1) A retail outlet sells a unit to the consumer, who either installs it or hires someone to install it; or (2) a plumbing distributor sells a unit to a contractor, who then sells it to a consumer and installs it. Bock suggested modifying the first distribution channel to include a contractor-installer. (Bock, Public Meeting Transcript, No. 34.4 at pp. 140–141) DOE agrees that a contractor-installer may be involved in the first path, but because the consumer purchases the product directly, the contractor does not mark up the cost of the unit. Thus, DOE did not include a contractor-installer in the first distribution path.

AHRI disagreed with the analytical results that indicate higher markups for new construction than for replacement applications. (AHRI, No. 33 at p. 1) DOE's markup for new construction is higher because it includes a markup for builders. Because builders incur the cost of a water heater or direct heating equipment installed in a new home, DOE finds it appropriate to include a markup for this cost. To estimate a builder markup, DOE calculated an average markup that applies to all costs builders incur (based on Census data).

NEEA and NPCC stated that DOE should repeat the process used to determine markups for the 2001 water heater rulemaking so that costs including markups align with the marketplace. They also stated that DOE's method for validating calculated markups is insufficient, although further explanation was not provided. (NEEA and NPCC, No. 42 at pp. 6–7)

The 2001 water heater rulemaking used data on retail prices to estimate markups. DOE did not use the same markup process as in the current rulemaking, however, because commenters on the previous rulemaking stated that DOE provided no consistency checks to determine the method's validity, and it did not account for the differences in price associated with different technologies. In addition, DOE has adopted a different approach to estimate markups in all of its rulemakings conducted in recent years that DOE believes is appropriate because it provides consistent estimates based on publicly-available statistics. DOE collected retail price data for water heaters to provide a check on its estimated markups. DOE's average calculated retail price for water heaters is close to the average Internet retail price for typical electric and oil-fired storage water heaters, 7 percent lower for gas-fired instantaneous water heaters, and 11 percent lower for gas-fired storage water heaters. Given the uncertainty regarding the representativeness of the retail price data that DOE collected, DOE considers that its markup method provides reasonably good agreement with prices in the market.

E. Life-Cycle Cost and Payback Period Analyses

DOE conducted LCC and PBP analyses to evaluate the economic impacts on individual conducted LCC and PBP analyses to evaluate the economic impacts on individual consumers of potential amended energy conservation standards for the three types of residential heating products. The LCC represents total consumer expenses during the life of an appliance, including purchase and installation costs plus operating costs (expenses for energy use, maintenance, and repair). To compute LCCs for the three heating products, DOE discounted future operating costs to the time of purchase, then summed those costs over the life of the appliances. The PBP is calculated using the change in purchase cost (normally higher) that results from an amended efficiency standard, divided by the change in annual operating cost (normally lower) that results from the standard.

DOE measures the changes in LCC and PBP associated with a given efficiency level relative to an estimate of base-case appliance efficiencies. The base-case estimate reflects the market in the absence of amended mandatory energy conservation standards, including the market for products that exceed the current standards.

For each set of heating products, DOE calculated the LCC and PBP for a nationally representative set of housing units, which were selected from EIA's Residential Energy Consumption Survey (RECS). The preliminary analysis used the 2001 RECS. The analysis for today's proposed rule uses the 2005 RECS. (See *http://www.eia.doe.gov/emeu/recs/*.) For each sampled household, DOE determined the energy consumption and energy price for the heating product. By developing a representative sample of households, the analysis captured the variability in energy consumption and energy prices associated with the use of residential heating products. DOE determined the LCCs and PBPs for each sampled household using a heating product's unique energy consumption and the household's energy price, as well as other variables. DOE calculated the LCC associated with the baseline heating product in each household. To calculate the LCC savings and PBP associated with equipment that meets higher efficiency standards, DOE's analysis replaced the baseline unit with a range of more-efficient designs.

EEI stated that not all residential water heaters are installed in homes, and thus DOE should modify its analysis to account for product usage and energy pricing in commercial establishments. (EEI, No. 40 at p. 5) DOE is unaware of data that show the percentage of residential water heater shipments that go to the commercial sector or how those products are used in the commercial sector, and the commenter did not provide such data. Therefore, DOE did not undertake a separate analysis for such installations.

Inputs to the calculation of total installed cost include the cost of the product—which includes manufacturer costs, manufacturer markups, retailer or distributor markups, and sales taxes—and installation costs. Inputs to the calculation of operating expenses include annual energy consumption, energy prices and price projections, repair and maintenance costs, product lifetimes, discount rates, and the year that proposed standards take effect. DOE created distributions of values for some inputs to account for their uncertainty and variability. Probabilities are attached to each value. As described above, DOE used samples of households to characterize the variability in energy consumption and energy prices for heating products. For the inputs to installed cost, DOE used probability distributions to characterize sales taxes. DOE also used distributions to characterize the discount rate and product lifetime that are inputs to operating cost.

The computer model DOE uses to calculate LCC and PBP, which incorporates Crystal Ball (a commercially available software program), relies on a Monte Carlo simulation to incorporate uncertainty and variability into the analysis. The Monte Carlo simulations randomly sampled input values from the probability distributions and household samples. The model calculated the LCC and PBP for products at each efficiency level for 10,000 housing units per simulation run.

Table IV.25 summarizes the approach and data DOE used to derive inputs to the LCC and PBP calculations. The table provides the data and approach DOE used for the preliminary TSD, as well as the changes made for today's NOPR. The following subsections discuss the

initial inputs and the changes DOE made to them.

TABLE IV.25—SUMMARY OF INPUTS AND KEY ASSUMPTIONS IN THE LCC AND PBP ANALYSES*

Inputs	Preliminary TSD	Changes for the proposed rule
Installed Costs		
Product Cost	Derived by multiplying manufacturer cost by manufacturer, retailer and distributor markups and sales tax, as appropriate.	No change.
Installation Cost	Water Heaters: Based on data from RS Means and other sources.	Applied additional cost for space constraints and other installation situations.
	DHE: Based on data from RS Means and DOE's furnace installation model.	No change.
	Pool Heaters: Based on data from RS Means	No change.
Operating Costs		
Annual Energy Use	Water Heaters: Used hot water draw model to calculate hot water use for each household in the sample from RECS 2001. Calculated energy use using the water heater analysis model (WHAM).	No change in approach; sample and data updated using RECS 2005.
	DHE: Based on sample and data from RECS 2001.	No change in approach; sample and data updated using RECS 2005.
	Pool Heaters: Based on sample and data from RECS 2001.	No change in approach; sample and data updated using RECS 2005.
Energy Prices	Electricity: Based on EIA's 2006 Form 861 data	Electricity: Updated using data from EIA's 2007 Form 861 data and EIA's Form 826.
	Natural Gas: Based on EIA's 2006 *Natural Gas Navigator*.	Natural Gas: Updated using EIA's 2007 *Natural Gas Navigator.*
	Variability: Regional energy prices determined for 13 regions.	Variability: No change.
Energy Price Trends	Forecasted using EIA's *AEO2008*	Forecasts updated using EIA's *AEO2009.*
Repair and Maintenance Costs	Water Heaters: Based on RS Means and other sources.	Updated various repair costs.
	DHE: Based on RS Means and other sources	Updated various repair costs.
	Pool Heaters: Based on RS Means and other sources.	Updated various repair costs.
Present Value of Operating Cost Savings		
Product Lifetime	Water Heaters: Based on range of lifetimes from various sources. Variability and uncertainty: characterized using Weibull probability distributions.	Revised average lifetimes for gas-fired and electric storage water heaters.
		Set lifetime of oil-fired storage water heater equal to that of gas-fired storage water heater.
	DHE: same as for water heaters	No change.
	Pool Heaters: same as for water heaters	Average lifetime increased from 6 years to 8 years
Discount Rates	Approach based on the cost to finance an appliance purchase. Primary data source was the Federal Reserve Board's SCF** for 1989, 1992, 1995, 1998, 2001, and 2004.	No change in approach; added data from 2007 SCF.**
Compliance Date of New Standard	Water heaters: 2015	No change.
	DHE and Pool Heaters: 2013	

* References for the data sources mentioned in this table are provided in the sections following the table or in chapter 8 of the NOPR TSD.
** Survey of Consumer Finances.

1. Product Cost

To calculate consumer product costs, DOE multiplied the manufacturer selling prices developed in the engineering analysis by the supply-chain markups described above (along with sales taxes). DOE used different markups for baseline products and higher-efficiency products, because the markups estimated for incremental costs differ from those estimated for baseline models.

2. Installation Cost

The installation cost is the total cost to the consumer to install the equipment, excluding the marked-up consumer product price. Installation costs include labor, overhead, and any miscellaneous materials and parts.

a. Water Heaters

In its preliminary analysis, DOE included several installation costs that reflect the space constraints on water heaters having thicker insulation. DOE assumed that major modifications for replacement installations would occur 40 percent of the time for water heaters with 3 inches or greater insulation. The analysis included costs for modifications such as removing door jams or incorporated strategies such as installing a smaller tank plus a tempering valve. To estimate the fraction of households that would require various modifications, DOE used the water heater location determined for

each sample household. DOE determined the location using information from the 2005 RECS, which reports whether the house has a basement, whether the basement is heated or unheated, and the presence or absence of a garage, crawlspace, or attic.

DOE received several comments on the space constraints for water heaters with increased insulation thicknesses. AHRI stated that the analysis does not fully recognize the size constraints on water heaters that have increased insulation. (AHRI, No. 33 at p. 2) For example, AHRI questioned DOE's assumption that space constraints do not apply if the floor area of a house is more than 1,000 square feet. (AHRI, No. 43 at p. 4) Rheem and AHRI stated that DOE should consider the space constraints of water heaters installed in attics. (Rheem, No. 49 at p. 2; AHRI, No. 43 at p. 4) Rheem stated that space constraints render larger products economically and technically infeasible. (Rheem, No. 49 at p. 1) EEI stated that DOE should consider the effect of adding insulation to electric storage water heaters and the issue of space constraints in replacement situations. (EEI, No. 40 at p. 4) PG&E, San Diego Gas and Electric (SDG&E), and SoCal Gas stated that if the diameter of a water heater is increased by 2 inches, installation becomes unworkable in highly constrained spaces. (PG&E, SDG&E, and SoCal Gas, No. 38 at p. 3)

A.O. Smith stated that many closets and cabinets do not have adequate clearance to accommodate larger-diameter water heaters. It stated that many electric storage water heaters cannot accept larger-diameter tanks without modifying the installation. A.O. Smith added that in the South, many water heater installations are in attics, and larger water heaters may not fit between the two ceiling joists in the pull-down staircase to the attic. A.O. Smith suggested that DOE's analysis should increase the number of installations that would require modification or the use of a small water heater with a tempering valve. (A.O. Smith, No. 37 at pp. 1–2)

In response to the above comments, for the NOPR analysis, DOE further investigated the issue of space constraints for water heaters with insulation thickness of 2 inches and above. Based upon the results of this inquiry, DOE expanded the percentage of installations that may have space constraints, including houses having a floor area of more than 1,000 square feet. For approximately 20 percent of replacement installations, DOE applied major modifications (removal of door jamb at an average cost of $191) for water heater designs with 2-inch insulation. For another 20 percent of replacement installations, DOE assumed that the household would install a smaller water heater and use tempering and check valves (at an average cost of $142). DOE also added a cost for extra labor needed to install water heaters in attics, and for installing larger water heaters (66 gallon and larger).

AHRI stated that the additional cost of $22 for tempering and check valves associated with installing an electric water heater is significantly understated. (AHRI, No. 43 at p. 4) In clarification, DOE incorporated an average cost of $142 for tempering and check valves for homes where they would be needed. The value of $22 is an average over all homes, including those where tempering and check valves are not necessary.

AHRI stated that a survey conducted by the SEGWHAI project in California determined that the average installation cost for a standard gas-fired storage water heater approached $1,000, which is higher than DOE's estimated average. (AHRI, Public Meeting Transcript, No. 34.4 at pp. 84–85) DOE used RS Means and installation cost data to derive a nationally-representative range of installation costs, whereas the SEGWHAI data pertain only to California. Because of the need to set a national standard, DOE has continued to rely on RS Means as a recognized and commonly used source for estimating such costs.

AHRI also stated that DOE underestimated the cost of condensing gas-fired storage water heaters. AHRI said that SEGWHAI estimated an installed cost of $4,000, compared to DOE's estimate of $1,782. The SEGWHAI estimate refers to a large-capacity commercial condensing unit having an EF of 0.84. For a condensing gas-fired storage water heater having an EF of 0.82 (a more appropriate comparison for the residential units at issue here), SEGWHAI proposes a $1,700 Tier 2 cost, which is comparable to the estimated installed cost of the 0.77 EF unit considered in DOE's analysis.

NEEA and NPCC questioned why DOE included the cost of installing an electrical outlet in the cost of gas-fired storage water heaters. (NEEA and NPCC, No. 42 at p. 8) In response, DOE understands that the baseline gas-fired water heater requires no electricity. If such a model is replaced with a higher-efficiency unit, however, an electrical outlet installation may be required.

The American Gas Association (AGA) stated that the installation costs for gas-fired storage water heaters having an EF greater than 0.62 need to include the cost of stainless steel vent connectors. (AGA, No. 44 at p. 3) DOE agrees that some models having an EF greater than 0.62 will require stainless steel vent connectors, but only if the recovery efficiency (RE) is 78 percent or higher. For the NOPR analysis, DOE added the cost of stainless steel vent connectors for all natural draft gas-fired water heaters that have an RE of 78 percent or higher.

A.O. Smith stated that the installation costs for electric storage water heaters at all efficiency levels are overstated by a factor of two. (A.O. Smith, No. 37 at p. 6) In response, DOE acknowledges that the average installation costs for electric storage water heaters presented in the preliminary TSD were too high. Consequently, for the NOPR analysis, DOE updated the labor cost. Instead of using national-average costs, DOE used region-specific costs, which yield a lower national-average cost for electric water heaters. DOE also reduced the labor time by one half hour. The result is that the average installation cost for electric storage water heaters is approximately half as much as the cost estimated in the preliminary analysis.

AGA stated that DOE's cost estimate for providing electrical supply to water heaters that incorporate electronic ignition is too low. AGA stated that DOE should use the cost estimates in other rulemakings for installations where electrical service is needed. (AGA, No. 44 at pp. 3–4) DOE's estimated cost for adding electrical supply for water heaters requiring electronic ignition, which is based on RS Means, is similar to the costs DOE used in the rulemaking for cooking products (74 FR 16040 (April 8, 2009)) and other rulemakings for installations that require electrical service.

Rheem stated that the cost of installing gas-fired, electric storage, and low-boy electric water heaters in manufactured housing units, where water heaters are typically installed under a counter, would be affected at higher efficiency levels. (Rheem, No. 49 at p. 2) As discussed previously, DOE considered and accounted for the cost of accommodating space constraints that may arise in some replacement applications when higher-efficiency units with thicker insulation are installed. In the specific case of manufactured homes, for the NOPR DOE increased the fraction of installations assumed to have space constraints by two-fold.

Table IV.26 shows the average installation costs used in the NOPR analysis for selected efficiency levels considered for gas-fired and electric

storage water heaters. (Installation costs for electric storage water heaters with heat pump design are further discussed below.) The costs vary with the location of the water heater. For electric resistance water heaters, the average installation costs at different efficiency levels are similar for basement and garage locations, but they are higher for water heaters of 0.95 EF for indoor and attic locations. For gas-fired water heaters, the average installation cost is much higher for 0.67 EF and 0.80 EF units because thereis a change from metal Category I vents to plastic Category IV vents.

TABLE IV.26—AVERAGE AND INCREMENTAL INSTALLATION COSTS FOR ELECTRIC AND GAS-FIRED STORAGE WATER HEATERS

Electric				Gas-fired			
EF	Description	Average installation cost (2008$) *	Incremental installation cost (2008$)	EF	Description	Average installation cost (2008$)*	Incremental installation cost (2008$)
0.90	1.5 in (Baseline)	$222		0.59	Pilot, 1 in	$576	
0.91 and 0.92	2 and 2.25 in	241	$19	0.62	Pilot, 1.5 in	595	$19
0.93 and 0.94	2.5 and 3 in	259	36	0.63	Pilot, 2 in	621	46
0.95	4 in	282	60	0.67	Power vent, 2 in	808	233
				0.80	Condensing, 2 in	828	252

* Average installation cost represents the weighted average cost for replacement and new construction applications.

DOE received several comments on installation costs for heat pump water heaters. In its preliminary analysis, DOE applied a distribution of costs for heat pump water heater installations in enclosed spaces, including situations where modifications would be required. In its comments on the preliminary analysis, GE stated that in general, heat pump water heaters should be no more difficult or expensive to install than standard electric storage water heaters, because they will require the same electrical and plumbing connections. GE noted that its heat pump water heater occupies *a* footprint similar to that of a standard unit. GE stated, however, that it may be difficult to install a heat pump water heater in a confined space that lacks ventilation. (GE, No. 51 at p. 2) A.O. Smith commented that the requirements for providing adequate air flow for a heat pump water heater may be higher than DOE estimated. (A.O. Smith, No. 37 at p. 1) NEEA and NPCC stated that DOE should use a distribution of costs to encompass heat pump water heater installations that require building modifications. (NEEA and NPCC, No. 42 at p. 8)

DOE agrees that installation of heat pump water heaters in enclosed spaces may require modifications to allow for adequate ventilation. Accordingly, for half of indoor replacement installations, DOE added a cost for installing a fully-louvered closet door to permit adequate air flow for the operation of the unit. It used a distribution of costs that averages $344. In addition, DOE assumed that the household facing space constraints would install a smaller water heater and use tempering and check valves in 20 percent of replacement installations.

DOE's preliminary analysis considered the fact that heat pump water heaters draw heat from the space in which they are located and release cooled air. Thus, when such a water heater is located in a conditioned space, its use affects the load that the home's space heating and air conditioning equipment must meet. DOE accounted for the additional energy costs that affected households would incur.

Southern commented that DOE had not adequately considered the issues Southern previously raised regarding installing heat pump water heaters to replace existing electric water heaters, which included the need to provide venting of cooled air released by such units. The commenter also stated that for new construction installations in multifamily housing units, interior locations are preferred for installing mechanical systems. Southern commented that a heat pump water heater could be installed indoors, but it would be costly to provide supply and return vents to the exterior. (Southern, No. 50 at pp. 2–3)

In the NOPR analysis, DOE continued to assume that many households that would be affected by indoor operation of a heat pump water heater would not want to incur the cost of a venting system, and would instead operate their heating and cooling systems to compensate for the effects of the heat pump water heater. However, DOE agrees that some households would prefer to install a venting system. DOE estimated that those households that would experience significant indoor cooling due to operation of the heat pump water heater in the heating months (i.e., the heat pump cooling load is greater than 10 percent of the space heating load) would have a venting system installed to exhaust and supply air. Using calculations specific to each household in the subsample for electric water heaters, DOE estimated that 40 percent of replacement installations would incur this cost, which averages $460.

Table IV.27 shows the average additional installation costs that DOE applied for heat pump water heaters (relative to the baseline electric storage water heater), along with the fraction of installations receiving each specific cost.

TABLE IV.27—ADDITIONAL INSTALLATION COSTS FOR HEAT PUMP WATER HEATERS

Installation cost description	Assignment to installations	Share of installations impacted (percent)	Average cost *
Additional Labor	All installations	100	$69
Closet Door Redesign due to Space Constraints	50 of indoor and heated basement replacement installations.	16	344
Tempering Valve Addition due to Space Constraints	20 of all replacement installations	16	142

TABLE IV.27—ADDITIONAL INSTALLATION COSTS FOR HEAT PUMP WATER HEATERS—Continued

Installation cost description	Assignment to installations	Share of installations impacted (percent)	Average cost *
Condensate Pump	25 of all replacement installations	20	154
Venting Adder **	40 of replacement installations with significant cooling load effects.	10	460
Larger Drain Pan	All installations	100	2

* Labor cost hours from 2008 RS Means; material cost from 2008 RS Means; condensate pump from retailer web sites; drain pan from 2001 TSD.

** All households experiencing significant cooling load effects in the heating season are either assigned the venting adder or the extra cost for space heating is included in the energy use calculations.

In summary, for the NOPR analysis, DOE used a distribution of installation costs for heat pump water heaters ranging from $213 to $1,918. The estimated average installation cost for a heat pump water heater (at 2.00 EF), weighted over replacement and new construction applications, is $446. This compares to average costs of $222 for a baseline (0.9 EF) electric storage water heater and $282 for a 0.95 EF electric storage water heater. For further details on DOE's derivation of installation costs for electric storage water heaters, please see chapter 8 of the NOPR TSD. DOE requests comments on its analysis of installation costs for water heaters; it is particularly interested in comments on its analysis of installation costs for heat pump water heaters. This is identified as issue 13 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.

Regarding installation of gas-fired instantaneous water heaters, A.O. Smith questioned whether DOE considered the need for the pressure relief valve and drain pans that manufacturers and codes require. (A.O. Smith, No. 37 at p. 6) Noritz stated that gas-fired instantaneous water heaters that achieve an EF of 0.83 or higher require condensate drains and some method of treating the condensate so that it can be disposed of, further adding to the installation cost. (Noritz, No. 36 at pp. 1–2) For the NOPR analysis, DOE included the cost and installation of a drain pan and pressure relief valve, as well as a filter for treating the condensate for units with an EF of 0.83 or higher.

A.O. Smith questioned whether DOE included the cost to replace a gas line with a larger line when installing gas-fired instantaneous water heaters in replacement applications. (In some cases the existing gas line is not adequate to accommodate the higher gas input required by the instantaneous water heaters.) A.O. Smith also stated that the analysis should include the costs related to extreme installation situations for gas-fired instantaneous water heaters, as DOE did for the costs of adding tempering valves or modifying door jams for electric storage water heaters. (A.O. Smith, No. 37 at p. 6) In response, DOE did not include the costs of such measures for gas-fired instantaneous water heaters, because in those cases where these measures would be required, the extremely high cost would likely lead households to purchase a storage water heater instead.

AHRI stated that DOE should reconcile its cost estimates for installing instantaneous water heaters with the SEGWHAI estimate, which is at least $200 to $300 more than DOE's estimate. (AHRI, Public Meeting Transcript, No. 34.4 at p. 168) As noted above, the SEGWHAI data pertain only to California, where labor costs are higher than the national average. For the NOPR, DOE used RS Means and installation cost data to derive region-specific installation costs.

b. Direct Heating Equipment

DOE used the approach in the 1993 TSD to calculate installation costs for baseline direct heating equipment for its preliminary analysis, as it believes that the factors affecting DHE installation are largely unchanged, and more recent data are not available. For gas wall gravity, floor, and room direct heating equipment, DOE increased installation costs for designs that require electricity. DOE made this adjustment for the replacement market only, because wiring is considered part of the general electrical work in new construction. DOE did not receive comments on the installation costs for direct heating equipment, so it maintained the same approach for the NOPR analysis. For further details on DOE's derivation of installation costs for direct heating equipment, please see chapter 8 of the NOPR TSD.

c. Pool Heaters

DOE developed installation cost data for the baseline pool heater in its preliminary analysis using RS Means and information in a consultant's report. DOE incorporated additional installation costs for designs involving electronic ignition and/or condensing. DOE did not receive comments on the installation costs for pool heaters, so it maintained this earlier approach for the NOPR analysis. For further details on DOE's derivation of installation costs for pool heaters, please see chapter 8 of the NOPR TSD.

3. Annual Energy Consumption

DOE determined the annual energy use in the field for the three types of heating products based on data obtained from RECS. DOE supplemented this data as required for each heating product, as discussed below.

a. Water Heaters

DOE calculated the annual energy consumption of water heaters in the sample households by considering the primary factors that determine energy use: (1) Hot water use per household; (2) energy efficiency of the water heater; and (3) operating conditions other than hot water draws. DOE used a hot water draw model to calculate hot water use for each household in the sample. The characteristics of each water heater's energy efficiency were obtained from the engineering analysis. DOE developed water heater operating conditions (other than hot water draws) from weather data and other relevant sources. DOE used a simplified energy equation, the water heater analysis model (WHAM), to calculate the energy use of water heaters. WHAM accounts for a range of operating conditions and energy efficiency characteristics. DOE's approach is explained in further detail in chapter 7 of the NOPR TSD.

To estimate hot water use by each sample household, DOE used a hot water draw model that accounts for the key factors that determine such use, such as the number and ages of the people who live in the household, the way they consume hot water, the

presence of hot-water-using appliances, the tank size and thermostat set point of the water heater, and the climate in which the residence is situated. In general, households with higher hot water use have water heaters with larger storage volume.

DOE received several comments on hot water use. ACEEE stated that the hot water draw model is insufficiently supported by field data. (ACEEE, Public Meeting Transcript, No. 34.4 at p. 178) NEEA and NPCC stated that DOE should provide more detail on the draw model and explain how it has been validated and calibrated. (NEEA and NPCC, No. 42 at p. 7) DOE acknowledges that insufficient field data are currently available to fully validate the draw model. However, Electric Power Research Institute (EPRI) developed the draw model based on a nationally representative sample of households. It is DOE's understanding that this widely-used model, which has been updated several times to account for changes in household hot water use, is the most credible tool available for modeling daily hot water use. The draw model is described in detail in appendix 7–B of this NOPR's TSD, as well as in the reports referenced in chapter 7 of the TSD.

NEEA and NPCC stated that current estimates of hot water use in the Pacific Northwest are about 20 percent higher than DOE's estimate of national-average daily use. (NEEA and NPCC, No. 42 at p. 7) Household hot water use differs among geographic regions for various reasons. DOE's analysis for Census Division 9 (which includes the Pacific Northwest) shows average hot water use by electric water heaters (47.9 gal/day) as being higher than the average national value (41.9 gal/day). Therefore, DOE believes that the estimates used in its analysis are reasonable.

EEI stated that DOE should consider the effects on hot water use of smaller households and the lower hot water use of new dishwashers and clothes washers, which are installed in both new and existing homes. (EEI, No. 40 at p. 6) For the NOPR, DOE used the most recent data available regarding household characteristics (from the 2005 RECS). In addition, DOE modified the hot water draw model to account for the impact of the efficiency standards that recently became effective for dishwashers and clothes washers.

BWC commented that hot water usage for gas-fired instantaneous water heaters may be different than for storage water heaters, although it has no evidence to support this idea. (BWC, No. 46 at p. 1) GE and Noritz stated that they are unaware of any data that support the assumption that consumers use more hot water with a gas-fired water heater. (GE, No. 51 at p. 3; Noritz, No. 36 at p. 2) Because DOE found no usable data showing greater or lesser hot water use for instantaneous water heaters than for storage water heaters, it estimated that households use the same volume of hot water with both types of water heaters.

Commenting on the calculation of energy use, Bock stated that WHAM does not accurately estimate energy consumption. (Bock, No. 53 at p. 2) In response, DOE notes that the WHAM equation has been validated against field data and that the comparison shows that WHAM results correlate well.

NEEA and NPCC stated that the estimated energy use results could be verified with sub-metered (*i.e.,* measured) field data. (NEEA and NPCC, No. 42 at p. 7) DOE found that the sub-metered field data for water heaters are insufficient to represent the range of national water heater energy use patterns. Therefore, DOE did not undertake such verification of its energy use estimates.

AHRI and Bock stated that the estimates of annual energy consumption for gas- and oil-fired water heaters are about 65 percent of test procedure usage specifications, whereas for electric water heaters it is 55 percent. AHRI questioned why the analysis appears to be using different field use assumptions for electric water heaters. (AHRI, No. 33 at p. 2; Bock, No. 53 at p. 2) In response, DOE's analysis used 2005 RECS data to estimate the energy consumption of water heaters in use by U.S. households. DOE's analysis thereby incorporates assumptions about operating conditions that are appropriate for each water heater type. For example, DOE determined that the average annual ambient temperature is higher for the stock of electric water heaters than for the stock of gas-fired water heaters. This difference contributes to the lower average energy use for electric water heaters.

A.O. Smith stated that the analysis of ambient air temperature effects does not include water heaters installed in attics in the South, and that the temperature derivation formulas are not applicable to attic installations, where solar gain can bring temperatures to ambient plus 40 °F in summer. (A.O. Smith, No. 37 at pp. 5–6) DOE's analysis included water heaters installed in attics and accounted for the range of temperatures found in such locations.

The energy efficiency and consumption of heat pump water heaters depend on ambient temperature. The equation DOE used to determine the energy consumption of heat pump water heaters is similar to the WHAM equation, but it modulates the recovery efficiency by applying a performance adjustment factor that is a function of the average ambient temperature. GE stated that because lower ambient temperatures will affect the performance of both heat pump and storage water heaters, DOE should use universally applied conditions to compare products. (GE, No. 51 at p. 2) DOE's energy calculations for heat pump and storage water heaters accounted for the effects of lower ambient temperatures. Heat pump water heaters are more affected by air temperature because the air provides the heat to warm the water.

As stated previously, DOE assumed that many households that would be affected by indoor operation of a heat pump water heater would not want to incur the cost of a venting system, and would instead operate their space heating or cooling system to compensate for the effects of the heat pump water heater. For each such home, DOE estimated the impact on space heating only during heating months (*i.e.,* when indoor temperature is at least 10 degrees greater than the average outdoor temperature), and the impact on air conditioning only during cooling months (*i.e.,* when indoor temperature is at least 5 degrees less than the average outdoor temperature). For each affected household in the electric water heater sub-sample, DOE included such indirect energy use in its calculation of the energy consumption of a heat pump water heater.

BWC stated that the assumed rated capacity (Pon) of 500 watts and cooling capacity of 3,500 Btu/h are not correct for all heat pump water heaters. (BWC, No. 46 at p. 2) For the preliminary analysis, DOE based those values on information available in AHRI's 2007 Consumers' Directory. For the NOPR, DOE created a distribution of values for Pon and cooling capacity that represent a range of heat pump water heater designs.

To calculate the energy use of gas-fired instantaneous water heaters, DOE used the same approach as for storage water heaters, modified to account for the absence of a tank. For the preliminary analysis, DOE applied a performance adjustment factor to account for evidence that the rated energy efficiency of instantaneous water heaters overstates actual performance, as reported in a study of instantaneous water heater installations conducted for the California Energy Commission (CEC). See Davis Energy Group. *Measure Information Template: Tankless Gas Water Heaters* (May 18, 2006); *http://*

www.energy.ca.gov/title24/2008standards/prerulemaking/documents/2006–05–18_workshop/2006–05–11_GAS_WATER.PDF. The adjustment factor effectively increases the calculated energy use of a gas-fired instantaneous water heater by 8.8 percent.

A.O. Smith noted its strong support for incorporating results from the CEC study to account for performance drop-off at small draw volumes. Because it requires 5 to 20 seconds for a gas-fired instantaneous water heater to heat up, 1 gallon of cold water can be wasted at the beginning of every water draw. (A.O. Smith, No. 37 at pp. 1, 5) ACEEE, PG&E, SDG&E, SoCal Gas, and AGA also support applying a performance adjustment. (ACEEE, No. 35 at p. 7; PG&E, SDG&E, and SoCal Gas, No. 38 at p. 4; AGA, No. 44 at p. 3) BWC expressed support for applying the 8.8-percent adjustment factor to gas-fired instantaneous water heaters, noting that its testing indicates that this number may be a little low. (BWC, No. 46 at p. 1) AHRI disagreed with applying an 8.8-percent factor. AHRI stated that the CEC study obtained its field data from one two-person household, which does not support a technically sound analysis. (AHRI, No. 33 at p. 2) Bock, GE, Noritz, and Rheem agreed. (Bock, No. 53 at p. 2; GE, No. 51 at p. 3; Noritz, No. 36 at p. 2; Rheem, No. 49 at pp. 6–7)

For the NOPR analysis, the performance adjustment factor DOE developed to capture the field energy use of gas-fired instantaneous water heaters is a probability distribution. The factor changes based on household hot water consumption, rather than on a fixed value that may represent only a fraction of households. The 8.8-percent adjustment factor DOE used for the preliminary analysis became the upper value in the distribution DOE used for the NOPR. The rest of the range was derived from a Gas Technology Institute (GTI) study that calculated an energy use reduction (adjustment) factor as a function of the volume of water gas-fired instantaneous water heaters use daily.

Southern stated that the draws in the hot water draw model should ideally be shorter for instantaneous water heaters. (Southern, Public Meeting Transcript, No. 34.4 at p. 194) ACEEE stated that PG&E and Consumers Union have performed studies on alternative draw patterns for gas-fired instantaneous water heaters that are more reflective of daily use. (ACEEE, Public Meeting Transcript, No. 34.4 at pp. 195–196) In response, DOE's performance adjustment factor accounts for a range of draw patterns associated with gas-fired instantaneous water heaters. Accordingly, DOE maintains its existing approach.

b. Direct Heating Equipment

For the preliminary analysis of LCC and PBP, DOE estimated energy consumption of direct heating equipment in functioning housing units. To represent actual households likely to purchase and use direct heating equipment, DOE developed a household sample from the 2001 RECS. DOE did not receive any comments on its approach for estimating energy consumption of direct heating equipment. Therefore, for the NOPR, DOE used the same approach, but it used a household sample drawn from the 2005 RECS.

c. Pool Heaters

For the preliminary analysis of LCC and PBP, DOE estimated energy consumption of pool heaters at functioning housing units. To represent actual households likely to purchase and use pool heaters, DOE used a household sample from the 2001 RECS. For the NOPR, DOE used a household sample drawn from the 2005 RECS.

AHRI stated that DOE's estimate of the annual energy use of a typical residential pool heater is overestimated by a factor of two. It said that DOE's estimated annual energy use of 53.6 MBtu [one thousand British thermal units] based on an energy use of 250 kBtu/h at 78 percent thermal efficiency (a baseline unit) represents 214 hours of operation annually. AHRI mentioned a CEC study that determined that gas pool heaters were used on average 104 hours per year, and it commented that the LCC should be recalculated based on that value. (AHRI, No. 43 at p. 5)

In response, DOE notes that the CEC study mentioned is based on a single study conducted in the early 1990s. For the NOPR, DOE did revise the range of operating hours used its analysis, although it relied on more recent data than the referenced CEC study. Instead, DOE calculated the pool heater operating hours using the estimated pool heater heating load for each sample household from the 2005 RECS. The average hours of operation in the NOPR analysis is 149 per year, which results in an annual energy use of 38 MBtu for a 250 kBtu/hr baseline unit operating at 78 percent thermal efficiency.

d. Rebound Effect

A rebound effect refers to increased energy consumption resulting from actions that increase energy efficiency and reduce consumer costs. For its preliminary analysis, DOE searched the literature on the rebound effect related to the three types of heating products, and also considered how EIA's NEMS incorporates a rebound effect.

For water heaters, DOE reviewed a summary of studies on the rebound effect, which concluded that ''technical improvements for residential hot water heating will be between 60 and 90 percent effective in reducing energy consumption for this service'' (implying a rebound effect of 10 to 40 percent). See L.A. Greening, D.L. Greene, C. Difiglio, Energy Efficiency and Consumption: The Rebound Effect, *Energy Policy,* 28(6–7): pp. 389–401. DOE found that NEMS does not incorporate a rebound factor, however. Balancing these findings from the literature with the zero rebound effect used in NEMS, DOE decided that a rebound effect of 10 percent was reasonable for water heaters.

A.O. Smith supported the use of a 10-percent rebound effect for water heaters. (A.O. Smith, No. 37 at p. 2) It added that there is an additional rebound effect for gas-fired instantaneous water heaters because of the promotion of ''unlimited'' or ''endless'' hot water. (A.O. Smith, No. 37 at p. 7) NEEA and NPCC suggested that DOE ignore the rebound effect except in the case of the highest candidate standard levels, as adoption of the lower efficiency levels would not provide consumers with noticeable savings in energy bills. (NEEA and NPCC, No. 42 at p. 8) ACEEE stated that it does not believe that the peer-reviewed literature supports assertions of large rebound effects, and the more conservative approach is to ignore them for these products. (ACEEE, No. 35 at p. 7)

As stated above, the literature does indicate the presence of a rebound effect of 10 to 40 percent for water heaters. Given that NEMS does not incorporate a rebound effect for water heating, and that the comments received on the preliminary analysis support a rebound effect of 10 percent or lower, DOE believes that using a value at the lower end of the range found in the literature (*i.e.,* 10 percent) is reasonable and has incorporated such an effect in its analyses for this NOPR.

4. Energy Prices

For the LCC and PBP, DOE derived average energy prices for 13 geographic areas consisting of the nine U.S. Census divisions, with four large States (New York, Florida, Texas, and California) treated separately. For Census divisions containing one of these large States, DOE calculated the regional average excluding the data for the large State.

DOE estimated residential electricity prices for each of the 13 geographic areas based on data from EIA Form 861, ''Annual Electric Power Industry Database,'' and EIA Form 826, ''Monthly Electric Utility Sales and Revenue Data.'' DOE calculated an average annual regional residential electricity price by: (1) Estimating an average residential price for each utility (by dividing the residential revenues by residential sales); and (2) weighting each utility by the number of residential consumers served in that region (based on EIA Form 861). DOE calculated an average monthly regional electricity price by first calculating monthly prices for each State, and then calculating a regional price by weighting each State in a region by the number of consumers in that State using EIA Form 826. For the preliminary TSD, DOE used EIA data from 2006. The NOPR analysis used the data from 2007.

DOE estimated average residential natural gas prices in each of the 13 geographic areas based on data from EIA's Natural Gas Navigator. See Energy Information Administration, *Natural Gas Navigator,* 2009; *http://tonto.eia.doe.gov/dnav/ng/ng_pri_sum_dcu_nus_m.htm.* DOE calculated an average natural gas price by first calculating the price for each State, and then calculating a regional price by weighting each State in a region by the number of consumers in that State. This method differs from the method DOE used to calculate electricity prices, because EIA does not provide utility-level data on gas consumption and prices. For the preliminary TSD, DOE used EIA data from 2006. For today's proposed rule, DOE used the data from 2007.

DOE estimated average residential prices for liquefied petroleum gas (LPG) in each of the 13 geographic areas based on data from EIA's State Energy Consumption, Price, and Expenditures Estimates. See Energy Information Administration, *2007 State Energy Consumption, Price, and Expenditure Estimates (SEDS); http://www.eia.doe.gov/emeu/states/_seds.html.* For the preliminary TSD, DOE used data from 2005. For today's proposed rule, DOE used the data from 2006.

DOE estimated average residential prices for oil in each of the 13 geographic areas based on data from EIA's Petroleum Navigator. See Energy Information Administration, *Petroleum Navigator, December, 2009; http://tonto.eia.doe.gov/dnav/pet/pet_cons_821dsta_a_EPD0_VAR_Mgal_a.htm.* For the preliminary TSD, DOE used data from 2006. For today's proposed rule, DOE used the data from 2007.

To estimate the trends in energy prices for the preliminary TSD, DOE used the price forecasts in *AEO2008.* To arrive at prices in future years, DOE multiplied current average regional prices by the forecast of annual average price changes in *AEO2008.* Because *AEO2008* forecasts prices to 2030, DOE followed past guidelines that EIA provided to the Federal Emergency Management Program. DOE used the average rate of change from 2020 to 2030 to estimate the price trend for electricity after 2030, and the average rate of change from 2015 to 2030 to estimate the price trend after 2030 for natural gas, LPG, and oil. For today's proposed rule, DOE used the same approach, but updated its energy price forecasts using *AEO2009.* DOE intends to update its energy price forecasts for the final rule based on the latest available *AEO.* In addition, the spreadsheet tools that DOE used to conduct the LCC and PBP analyses allow users to select price forecasts from either *AEO's* high-growth scenario or low-growth scenario to estimate the sensitivity of the LCC and PBP to different energy price forecasts.

Earthjustice stated that DOE must quantify the effect of a CO_2 emissions cap on energy prices in the LCC analysis. (Earthjustice, No. 47 at p. 4) DOE believes that it would be inappropriate to speculate on the form of any Federal carbon control legislation, and the ensuing impacts on residential energy prices. Therefore, DOE does not incorporate such impacts into the energy price forecasts that DOE used for the NOPR analysis.

5. Repair and Maintenance Costs

Repair costs are associated with repairing or replacing components that have failed in the appliance, whereas maintenance costs are associated with maintaining the operation of the equipment. Determining the repair cost involves determining the cost and the service life of the components that are likely to fail. Discussion of repair and maintenance costs for the three types of heating products is provided below, along with a summary of public comments on this topic. For more information on DOE's development of repair and maintenance cost estimates, see chapter 8 of the NOPR TSD.

a. Water Heaters

The repair cost for a water heater reflects the cost for a service call when the product fails. There are four design options considered for the gas-fired water heater analysis that may encounter repair cost during the lifetime of the water heater: (1) Pilot ignition; (2) electronic ignition; (3) power vent; and (4) condensing design. The energy efficiency levels that include power vent or condensing design encounter both power vent as well as electronic ignition repair costs. For each of the above four design options, DOE estimated both an average cost and the year in which the repair would, on average, be most likely to occur.

AHRI stated that DOE's analysis of gas-fired water heaters ignored the introduction of FVIR designs that require maintenance. (AHRI, No. 43 at pp. 1–2) For the NOPR, DOE added a cost for maintaining the FVIR for all gas-fired storage water heaters.

For the preliminary analysis, DOE determined that there is virtually no maintenance or repair associated with conventional electric resistance water heaters. For a heat pump water heater, maintenance includes annual cleaning of the air filter and a preventive maintenance cost to check the evaporator and refrigeration system. Although the literature suggests that no professional help is necessary for this maintenance, DOE believes there are instances in which such help is needed. For some locations where the heat pump water heater might be more exposed to the outdoor environment, such as garages and crawlspaces, DOE applied a 5-year preventative maintenance cost based on experience with heat pump water heater outdoor installations in Australia, which has roughly comparable conditions as much of the United States. See Rheem Manufacturing Company (Australia), Owners Guide and Installation Instruction: Air Sourced Heat Pump Water Heater, 2006; *http://www.rheem.com.au/images/pdf/owners_heatpump_126524B_0610.pdf.* DOE estimated that 27 percent of these exposed installations would require this maintenance, based on a survey conducted for central air conditioners, which include heat exchangers that operate similarly as the evaporator heat exchanger in a heat pump water heater.

ACEEE recommended that DOE use refrigerator maintenance costs for heat pump water heaters because of similarities in the components and operation. (ACEEE, No. 35 at p. 6) A.O. Smith stated that the cost for regular and routine maintenance on heat pump water heaters must be considered. It added that it is inaccurate to compare a heat pump water heater to a refrigerator due to the much longer duty cycle on a heat pump water heater, the slow recovery time, the need for frequent cleaning, and the scale build-up on the

water side, which is not an issue with refrigerators. (A.O. Smith, No. 37 at p. 8) GE stated that DOE ascribed inappropriate maintenance costs to heat pump water heaters, which require no more attention than a standard room air conditioner. (GE, No. 51 at p. 2)

In response, DOE notes that it based its maintenance costs for heat pump water heaters on experience in Australia, so it is not necessary to use another appliance as a proxy. DOE acknowledges that many heat pump water heaters may require little or no maintenance. However, DOE believes that because the field experience with heat pump water heaters is limited, it is reasonable to apply a maintenance cost for some installations. As described above, DOE applied a 5-year preventative maintenance cost for 27 percent of the installations in garages and crawlspaces.

Regarding repair of conventional electric resistance water heaters, ACEEE stated that data may be available on the number of resistive elements that need to be replaced. (ACEEE, Public Meeting Transcript, No. 34.4 at p. 211) Based on this comment, for the NOPR, DOE added a cost for replacing resistive elements at least once during the lifetime for one-fourth of installations.

For heat pump water heaters, DOE considered the cost of replacing the compressor and the evaporator fan and the year in which, on average, they would be expected to fail. DOE used a lifetime distribution for the compressor and evaporator fan with an average lifetime of 19 years. For the majority of households, the compressor and evaporator fan would likely not fail during the water heater's lifetime. However, because there is some overlap between the lifetime distribution used for the compressor and evaporator fan and the lifetime distribution used for electric water heaters (see below), DOE included a compressor and evaporator fan repair cost in the appropriate year for some households. DOE requests comments on its analysis of repair and maintenance costs for heat pump water heaters. This is identified as issue 14 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.

Regarding repair costs of gas-fired instantaneous water heaters, AGA stated that DOE needs to account for incremental design options, particularly electronic ignition maintenance and replacement. (AGA, No. 44 at p. 4) In its preliminary analysis, DOE already applied a distribution of costs for electronic ignition repair based on RS Means. It maintained the same approach for the NOPR analysis.

For the preliminary analysis, DOE applied a maintenance cost for some gas-fired instantaneous water heaters to address the fouling of the heat exchanger from hard water, periodic sensor inspections, and filter changes. A.O. Smith stated that $85 per year is too low for annual maintenance (de-liming) for gas-fired instantaneous water heaters. (A.O. Smith, No. 37 at p. 7) In response, for the NOPR, DOE used a distribution of costs for maintenance of gas-fired instantaneous water heaters, not a single cost of $85, and also applied no cost for some installations.

Noritz stated that the basis for including de-liming costs for gas-fired instantaneous water heaters is clauses in the warranty, which is standard for all water heaters, so de-liming costs should not be included only for gas-fired instantaneous water heaters. (Noritz, No. 36 at p. 2) Noritz stated that the necessity for de-liming varies, so it would be best not to include the cost for any class of water heater, but if it is included for gas-fired instantaneous water heaters, DOE should account for the fact that it is not necessary for every installation. (Noritz, No. 36 at pp. 2–3) DOE agrees that de-liming is not necessary for every installation, so in the NOPR analysis, it assigned zero cost to a fraction of households.

For the preliminary analysis, DOE determined that maintenance for oil-fired water heaters is most frequently performed under annual maintenance contracts, which typically include repair of failed components. DOE estimated the average cost of separate maintenance/repair contracts only for water heaters as $153 per year. This mean value comes from a collection of annual maintenance contract prices, which were gathered from web sites that represent oil-fired product suppliers in the eastern U.S. The same maintenance cost applies to all energy efficiency levels. DOE did not receive any comments on this topic, so it maintained the same approach for the NOPR analysis.

Bock stated that DOE did not include the cost of annually flushing oil-fired storage water heaters. (Bock, No. 53 at p. 2) For the NOPR, DOE included a cost for flushing the tanks of all storage water heaters, including oil-fired storage water heaters.

b. Direct Heating Equipment

For the preliminary analysis, DOE determined that maintenance cost data for gas-fired furnaces provide a reasonable approximation of maintenance costs for DHE because of the similarity in design and operation. DOE derived the costs from a field survey sponsored by several gas utilities that estimated the average total service charge (parts, labor, and other charges). See Jakob, F. E., *et al.,* Assessment of Technology for Improving the Efficiency of Residential Gas Furnaces and Boilers, 1994. Gas Research Institute. Chicago, IL. Report No. GRI–94/0175. DOE used a maintenance frequency of once every 5 years for all direct heating equipment.

DOE determined the repair costs for DHE using an approach that reflects the cost and the service life of the components that are likely to fail. The non-condensing designs DOE considered that may encounter repair costs during the lifetime of the product include pilot ignition, electronic ignition, circulating blower, and induced draft. The repair cost of the condensing design includes electronic ignition, circulation blower, and induced draft components. DOE did not receive comments on maintenance and repair costs for DHE, so it continued to use the existing approach for its NOPR analysis.

c. Pool Heaters

For the preliminary analysis, DOE determined that most pool owners do not perform any pool heater maintenance except when the heater does not come on. In such situations, the maintenance work includes checking controls, cleaning burners, cleaning the heat exchanger, starting the heater, and measuring water temperature rise. DOE used an average cost of $351. For units employing power vent and condensing design options, maintenance also includes measuring combustion differential pressure. For these units, DOE used an average cost of $491 and estimated that the maintenance occurs on average in the fifth year of the pool heater lifetime. Raypak stated that pool heaters need maintenance more than every 5 years due to outdoor installation. (Raypak, Public Meeting Transcript, No. 34.4 at p. 215) DOE applied a distribution ranging from 3 to 6 years for pool heater maintenance. Thus, some applications would receive maintenance more than once every 5 years.

Pool heater design options that may encounter repair cost during the lifetime of the pool heater include pilot ignition, electronic ignition, and power vents. For each of these, DOE estimated the average repair cost and when in the product lifetime such repair would be likely to occur. DOE continued to use the above approach for the NOPR analysis.

6. Product Lifetime

For the preliminary analysis, DOE used a variety of sources to establish minimum, average, and maximum values for the lifetime of each of the three types of heating products. For each product class, DOE characterized the product lifetime using a Weibull probability distribution that ranged from minimum to maximum lifetime estimates. See chapter 8 of the NOPR TSD for further details on the sources DOE used to develop product lifetimes.

For the preliminary TSD, DOE chose average lifetimes for gas-fired and electric storage water heaters based on the values in the middle of each range: 12 years for gas units and 14 years for electric units. In the NOPR analysis, DOE found that applying the above values to historic shipments resulted in estimates of the stock of gas-fired and electric storage water heaters that did not match the data on the stock reported in the Census Bureau's 2007 American Housing Survey (AHS), which covers all housing units in the United States. The estimated stock is too small for gas-fired water heaters and too large for electric water heaters. Using an average lifetime of 13 years for both gas-fired and electric storage water heaters produces stock estimates for 2007 that are close to the stock numbers from the AHS. Furthermore, several sources report a lifetime of 13 years. (See chapter 8 of the NOPR TSD.) Therefore, DOE used an average lifetime of 13 years for both gas-fired and electric storage water heaters in its NOPR analysis.

DOE evaluated whether electric heat pump water heaters have a different lifetime from the baseline products. An accelerated durability test of heat pump water heaters conducted by Oak Ridge National Laboratory suggests that these units have similar lifetime as standard electric resistance storage water heaters. Therefore, DOE used the same lifetime for all efficiency levels considered for this product class.

For gas-fired instantaneous water heaters, DOE used a distribution with 20 years as the average lifetime for these units in its preliminary analysis. A.O. Smith stated that a 20-year lifetime for gas-fired instantaneous water heaters is too long, and there is not adequate data to backup this claim. (A.O. Smith, No. 37 at p. 2) BWC stated that DOE's average lifetime for gas-fired instantaneous water heaters is derived from manufacturer literature and it suggested that DOE instead use an independent source for this information. (BWC, No. 46 at p. 2) DOE is not aware of and the commenters did not provide any other source of data on the lifetime of gas-fired instantaneous water heaters, so it used the same distribution as in the preliminary analysis.

For oil-fired storage water heaters, DOE used 9 years as the average lifetime. Bock stated that oil-fired storage water heaters should have the same lifetime as gas-fired storage water heaters because they are identical in material, construction, volume, and storage temperature. (Bock, No. 53 at p. 2) For the NOPR analysis, DOE used the same lifetime for oil-fired storage water heaters as for gas-fired storage water heaters (*i.e.,* 13 years).

For direct heating equipment, DOE used the average, minimum, and maximum lifetime values from its 1993 TSD for direct heating equipment because it did not find more recent representative data. The average lifetime DOE used for each of the product classes was 15 years. DOE did not receive any comments on DHE lifetime, so it continued to use the above values for the NOPR.

For pool heaters, DOE used 8 years as an average lifetime based on the available data. DOE did not receive any comments on pool heater lifetime, so it continued to use the above value for the NOPR.

7. Discount Rates

To establish discount rates for the heating products in the preliminary analysis, DOE derived estimates of the finance cost of purchasing these appliances. Because the purchase of equipment for new homes entails different costs for consumers than the purchase of replacement equipment, DOE used different discount rates for new construction and replacement. See chapter 8 of this NOPR's TSD for further details on the development of discount rates for heating products.

DOE estimated discount rates for appliance purchases in new housing using the effective real mortgage rate for homebuyers, which accounts for deducting mortgage interest for income tax purposes, and an adjustment for inflation. DOE developed a distribution of mortgage interest rates using data from the Federal Reserve Board's ''Survey of Consumer Finances'' (SCF) for 1989, 1992, 1995, 1998, 2001, and 2004. For today's NOPR, DOE added data from the 2007 SCF. Because the mortgage rates carried by households in these years were established over a range of time, DOE believes they are representative of rates that may apply when amended standards take effect. The effective real interest rates on mortgages across the six surveys averaged 3.0 percent.

DOE's approach for deriving discount rates for replacement purchases involved identifying all possible debt or asset classes that might be used to purchase replacement products, including household assets that might be affected indirectly. DOE used data from the surveys mentioned above to estimate the average percentages of the various debt and equity classes in the average U.S. household portfolios. DOE used SCF data and other sources to develop distributions of interest or return rates associated with each type of equity and debt. For today's NOPR, DOE added data from the 2007 SCF. The average rate across all types of household debt and equity, weighted by the shares of each class, is 4.8 percent.

8. Compliance Date of the Amended Standards

In the context of EPCA, the compliance date is the future date when parties subject to the requirements of a new standard must begin to comply. As described in DOE's semi-annual implementation report for energy conservation standards activities submitted to Congress pursuant to section 141 of EPACT 2005, a final rule for the three types of heating products that are the subject of this rulemaking is scheduled to be completed by March 2010. Compliance with amended energy efficiency standards for direct heating equipment and pool heaters is required three years after the final rule is published in the **Federal Register** (in 2013); compliance with amended standards for water heaters is required five years after the final rule is published (in 2015). DOE calculated the LCC for the three types of heating products as if consumers would purchase new products in the year compliance with the standard is required.

Earthjustice stated that DOE assumes a 5-year lead time to be consistent with the requirements in 42 U.S.C. 6295(e)(4)(B), which requires that DOE ''publish a final rule no later than January 1, 2000 to determine whether standards in effect * * * should be amended,'' and that ''any such amendment shall apply to products manufactured on or after January 1, 2005.'' The commenter stated that this assumption is contrary to the structure and purpose of the statute. It also declared that there is no statutory language to deal with the current situation, which involves determining a compliance date for a standard that DOE was required to adopt nearly 10 years ago. Earthjustice stated that the required publication date and compliance dates have passed, and that it is unreasonable

to apply the 5-year lead time specified in 42 U.S.C. 6295(e)(4)(B). (Earthjustice, No. 47 at p. 5) ASAP stated that DOE's compliance date of 2015 is arbitrary because the law states that compliance with the standard is required by 2005. ASAP stated that DOE is obligated to use time as a variable and look at a range of implementation dates for all of the standard levels to determine the standard that would best meet the statutory criteria. ASAP suggested that DOE analyze a range of compliance dates from 18 months to 8 years after publication of the final rule. (ASAP, Public Meeting Transcript, No. 34.4 at pp. 57–58) AHRI stated that DOE is obligated to allow five years between the final rule and the compliance date for the requirements for water heater products. (AHRI, Public Meeting Transcript, No. 34.4 at pp. 60–61)

In response, DOE notes that the language in 42 U.S.C. 6295(e)(4) specifically states that amended standards, if any, shall apply to products manufactured on or after the 36-month period beginning on the date such a final rule is published for the first iteration of rulemaking and on or after the 60-month period beginning on the date such a final rule is published for the second iteration of rulemaking. (42 U.S.C. 6295(e)(4)(A)–(B)) The language of 42 U.S.C. 6295(e)(4)(B) anticipates that a standard will be in place for covered water heaters that are manufactured precisely five years after publication of the final rule and prospectively thereafter. DOE believes that the time differential, as specified in EPCA, between the publication of the final rule and the compliance deadline reflects Congress's judgment as to what constitutes adequate lead time.

9. Product Energy Efficiency in the Base Case

To accurately estimate the percentage of consumers who would be affected by a particular standard level, DOE's analysis considered the projected distribution of product efficiencies that consumers purchase under the base case (*i.e.,* the case without new energy efficiency standards). DOE refers to this distribution as a base-case efficiency distribution. Using the projected distribution of product efficiencies for each heating product, DOE randomly assigned a specific product efficiency to each sample household. If a household was assigned a product efficiency greater than or equal to the efficiency of the standard level under consideration, the LCC calculation shows that this household is not affected by that standard level. Each of the three types of heating products is addressed below, including relevant public comments and DOE's response. For further information on DOE's estimation of base-case market shares, see chapter 8 of the NOPR TSD.

a. Water Heaters

In its preliminary analysis, DOE estimated the base-case market shares of various energy efficiency levels for water heaters in the effective year. DOE began with data on shipments for 2002–2006 from AHRI, supplemented with data on the number of water heater models at different energy efficiency levels reported in AHRI directories and the Federal Trade Commission directory. (See chapter 8 of the NOPR TSD for citations for these data sources.) For gas-fired and electric storage water heaters, DOE then estimated the future market impact of the ENERGY STAR program. Effective in 2010, the minimum efficiency for the ENERGY STAR designation will be 0.67 EF for non-condensing gas-fired storage water heaters, 0.80 EF for condensing gas-fired storage water heaters, and 2.0 EF for heat pump water heaters. To estimate the base-case market shares of these products, DOE considered the market penetration goals set by the ENERGY STAR program.

For gas-fired instantaneous water heaters, DOE estimated that the base-case market shares in 2015 would be equivalent to current shares. In the case of this product, the majority of the market (approximately 85 percent of shipments) is already at the ENERGY STAR level, so there is limited room for the shares of ENERGY STAR products to increase in the near future. For oil-fired storage water heaters, DOE also estimated that the market shares in 2015 would be equivalent to current shares, as there has been little change in the past decade.

Southern and EEI stated that the 5-percent market share DOE projected for heat pump water heaters under the base case seems too high. (Southern, Public Meeting Transcript, No. 34.4 at p. 186; EEI, No. 40 at p. 5) GE stated that based on the expansion of the market for front-loading clothes washers, which was a new higher-efficiency product in the U.S. market with higher first cost but much lower operating costs, the predicted 5-percent market share for heat pump water heaters is not unreasonable. (GE, Public Meeting Transcript, No. 34.4 at pp. 188–189) In response, DOE notes that, consistent with manufacturer predictions, heat pump water heaters entered the mass market in 2009. Given the high level of interest in promoting ENERGY STAR-qualified appliances, DOE believes that its projection was reasonable, and it used the same market share for the NOPR analysis.

For oil-fired storage water heaters, Bock stated that the market shares for Efficiency Level 5 and 6 are much higher than indicated in the preliminary TSD. (Bock, No. 34.4 at pp. 187–188) For the NOPR, DOE updated its base-case efficiency distribution to reflect data from the March 2009 AHRI directory of certified products, which resulted in a higher market share at levels 5 and 6.

DOE's projected base-case energy efficiency market shares are shown in Table IV.28. These market shares represent the products that households would purchase in 2015 in the absence of revised energy conservation standards.

TABLE IV.28—WATER HEATERS: BASE-CASE ENERGY EFFICIENCY MARKET SHARES

Gas storage		Electric storage		Oil storage		Gas-fired instantaneous	
EF	Market share (%)	EF	Market share (%)	EF	Market share (%)	EF	Market share (%)
0.59	87.2	0.90	36.2	0.53	22.2	0.62	0.3
0.62	3.0	0.91	25.6	0.54	0.0	0.69	1.8
0.63	0.9	0.92	8.7	0.56	0.0	0.78	1.0
0.64	1.2	0.93	19.5	0.58	0.0	0.80	12.2
0.65	1.4	0.94	2.5	0.60	11.1	0.82	62.9
0.67	5.3	0.95	2.5	0.62	16.7	0.84	2.8
0.80	1.0	2.0	4.0	0.66	40.0	0.85	3.8
		2.2	1.0	0.68	10.0	0.92	9.5

TABLE IV.28—WATER HEATERS: BASE-CASE ENERGY EFFICIENCY MARKET SHARES—Continued

Gas storage		Electric storage		Oil storage		Gas-fired instantaneous	
EF	Market share (%)	EF	Market share (%)	EF	Market share (%)	EF	Market share (%)
						0.95	5.7
	100		100		100		100

b. DHE

Little is known about the efficiency distribution of direct heating equipment that consumers in the United States currently purchase. For the preliminary analysis, DOE estimated the market shares of different energy efficiency levels within each product class in the base case using data in the March 2007 GAMA directory. DOE did not receive any comments on its estimation of base-case market shares for DHE. It employed the same approach for its NOPR analysis, but used more recent GAMA data on the number of models at different energy efficiency levels. See Gas Appliance Manufacturers Association, *Consumer's Directory of Certified Efficiency Ratings for Heating and Water Heating Equipment* (March 2008); *http://www.gamanet.org/gama/inforesources.nsf/vAllDocs/Product+Directories?OpenDocument.*

c. Pool Heaters

No shipments data are available on the distribution of gas-fired pool heaters by energy efficiency level. For the preliminary TSD, DOE estimated the market shares of different energy efficiency levels in the base-case by using data from the FTC on the number of gas-fired pool heater models at different energy efficiency levels as a proxy for shipments. DOE did not receive any comments on its estimation of base-case market shares for pool heaters. It employed the same approach for the NOPR analysis, but used more recent FTC data on the numbers of models at various energy efficiency levels.

10. Inputs to Payback Period Analysis

The payback period is the amount of time it takes the consumer to recover the additional installed cost of more-efficient products, compared to baseline products, through energy cost savings. The simple payback period does not account for changes in operating expense over time or the time value of money. Payback periods are expressed in years. Payback periods that exceed the life of the product mean that the increased total installed cost is not recovered in reduced operating expenses.

The inputs to the PBP calculation are the total installed cost of the equipment to the customer for each efficiency level and the annual (first-year) operating expenditures for each efficiency level. The PBP calculation uses the same inputs as the LCC analysis, except that energy price trends and discount rates are not needed.

NEEA and NPCC stated that that they are concerned about how the payback period was calculated for efficiency level 3 for gas-fired instantaneous water heaters (0.80 EF) because of the lengthy payback period. (NEEA & NPCC, No. 42 at p. 2) In response, DOE notes that almost the entire market is at CSL 3 or higher. Therefore, the PBP that DOE calculated applies only to the very few households that would be affected by a standard at this level. There is a significant cost differential in going from CSL 1 and 2 to CSL 3, which leads to very high PBPs for the affected households.

11. Rebuttable-Presumption Payback Period

The PBP analysis helps to determine whether the 3-year rebuttable presumption of economic justification applies—that is, whether the purchaser will recover the higher installed cost of more-efficient equipment through lowered operating costs within 3 years. (42 U.S.C. 6295(o)(2)(B)(iii)) For each efficiency level it considered, DOE determined the value of the first year's energy savings by calculating the quantity of those savings in accordance with DOE's test procedure, and multiplying that amount by the average energy price forecast for the year in which a new standard is expected to take effect. Section V.B.1.c of this notice and chapter 8 of the NOPR TSD present the rebuttable presumption PBP results.

Earthjustice stated the DOE must justify any refusal to adopt standard levels at least as strong as those that satisfy the rebuttable presumption payback period. (Earthjustice, No. 47 at p. 3) The LCC and PBP analyses generate values that calculate the payback period for consumers of potential energy conservation standards; these include, but are not limited to, the 3-year payback period contemplated under the rebuttable presumption test discussed above. However, DOE routinely conducts an economic analysis that considers the full range of impacts, including those to the consumer, manufacturer, Nation, and environment, as required under 42 U.S.C. 6295(o)(2)(B)(i) and 42 U.S.C. 6316(e)(1)). The results of this analysis serve as the basis for DOE to definitively evaluate the economic justification for a potential standard level, thereby supporting or rebutting the results of any preliminary determination of economic justification.

F. National Impact Analysis—National Energy Savings and Net Present Value Analysis

The national impact analysis assesses the national energy savings and the net present national impact analysis assesses the national energy savings and the net present value of total product costs and savings expected to result from standards at specific efficiency levels. DOE used the NIA spreadsheet to calculate energy savings and NPV, using the annual energy consumption and total installed cost data from the LCC analysis. DOE forecasted the energy savings, energy cost savings, product costs, and NPV for each product class from 2013 (or 2015) through 2043 (or 2045). The forecasts provided annual and cumulative values for the above output parameters. In addition, DOE used its NIA spreadsheet to analyze scenarios that used inputs from the *AEO2009* Low Economic Growth and High Economic Growth cases. These cases have higher and lower energy price trends compared to the Reference case, as well as higher and lower housing starts, which result in higher and lower appliance shipments to new homes.

Earthjustice stated that DOE needs to consider the impact of increased employment and reduced emissions in its national impact analysis. (Earthjustice, No. 47 at p. 1) NRDC stated that DOE failed to include the benefits of avoided carbon emissions in

the NIA. (NRDC, No. 48 at p. 5) In response, DOE accounts for the impacts on employment in the employment impact analysis (section IV.I), and it quantifies avoided carbon emissions in the environmental assessment (section IV.K).The NIA primarily considers the national energy savings and the NPV from a national perspective of total appliance consumer costs and savings expected to result from standards, and it also evaluates the benefits to the economy of reduced energy prices due to standards. Even though employment and reduced emissions are separately addressed outside the NIA, DOE thoroughly considers these issues when conducting its analyses in the context of standard setting.

Table IV.29 summarizes the approach and data DOE used to derive the inputs to the NES and NPV analyses for the preliminary analysis and the changes to the analyses for the proposed rule. A discussion of these inputs and changes follows. See chapter 10 of the NOPR TSD for further details.

TABLE IV.29—APPROACH AND DATA USED FOR NATIONAL ENERGY SAVINGS AND CONSUMER NET PRESENT VALUE ANALYSES

Inputs	Preliminary TSD	Changes for the proposed rule
Shipments	Annual shipments from shipments model	See IV.F.1.a through IV.F.1.d.
Compliance Date of Standard	Water Heaters: 2015. DHE and Pool Heaters: 2013.	No change.
Base-Case Forecasted Efficiencies	Efficiency market shares estimated for compliance year. SWEF * remains constant except for gas and electric water heaters, for which SWEF increases slightly over forecast period.	No change in approach; updated efficiency market shares estimated for compliance year.
Standards-Case Forecasted Efficiencies	''Roll-up'' scenario used for determining SWEF in 2013 (or 2015) for each standards case. SWEF remains constant except for gas and electric water heaters, for which SWEF increases slightly over forecast period.	No change in approach; updated efficiency market shares estimated for compliance year.
Annual Energy Consumption per Unit	Annual weighted-average values as a function of SWEF.	No change.
Rebound Effect	Water heaters: 10%. DHE: 15%. Pool Heaters: 10%.	No change.
Total Installed Cost per Unit	Annual weighted-average values as a function of SWEF.	No change.
Energy Cost per Unit	Annual weighted-average values as a function of the annual energy consumption per unit and energy (and water) prices.	No change.
Repair Cost and Maintenance Cost per Unit.	Annual values are a function of efficiency level	No change.
Escalation of Energy Prices	*AEO2008* forecasts (to 2030) and extrapolation to 2043 (and 2045).	Updated using *AEO2009* forecasts.
Energy Site-to-Source Conversion Factor	Varies yearly and is generated by DOE/EIA's NEMS.	No change.
Discount Rate	Three and seven percent real	No change.
Present Year	Future expenses are discounted to 2007	Future expenses are discounted to 2010, when the final rule will be published.

* Shipments-Weighted Energy Factor.

1. Shipments

The shipments portion of the NIA spreadsheet is a model that uses historical data as a basis for projecting future shipments of the appliance products that are the subject of this rulemaking. In projecting shipments for water heaters and pool heaters, DOE accounted for two market segments: (1) New construction and (2) replacement of failed equipment. Data were unavailable to develop separate forecasts of direct heating equipment shipments for replacement and new home installations, so the forecast was based on the time series of historical total shipments developed for each product class.

Table IV.30 summarizes the approach and data DOE used to derive the inputs to the shipments analysis for the preliminary analysis, and the changes DOE made for today's proposed rule. A discussion of these inputs and changes follows. For details on the shipments analysis, see chapter 9 of the NOPR TSD.

TABLE IV.30—APPROACH AND DATA USED FOR THE SHIPMENTS ANALYSIS

Inputs	Preliminary analysis	Changes for the proposed rule
Historical Shipments	Water Heaters: Data provided by AHRI	Water Heaters: Used updated data from AHRI.
	DHE: Data provided by AHRI and DOE estimates	DHE: Used data from manufacturers and HPBA * for hearth products.
	Pool Heaters: Data from 1993 TSD and DOE estimates.	Pool Heaters: Used inputs from manufacturers.
New Construction Shipments	For water heaters and pool heaters, determined by multiplying housing forecasts by forecasted saturation of products in new housing.	No change in approach. New housing forecast updated with *AEO2009* projections.

TABLE IV.30—APPROACH AND DATA USED FOR THE SHIPMENTS ANALYSIS—Continued

Inputs	Preliminary analysis	Changes for the proposed rule
	Housing forecasts based on *AEO2008* projections. New housing product saturations based on AHS for water heaters, consultant data for pool heaters.	
Replacements	For water heaters and pool heaters, determined by tracking total product stock by vintage and establishing the failure of the stock using retirement functions from the LCC and PBP analysis.	No change for water heaters. For pool heaters, included estimated non-replacement of some pool heaters.
First-Time Owners	Included for pool heaters	No change.

* Hearth, Patio & Barbecue Association.

To determine new construction shipments, DOE used forecasts of housing starts coupled with estimates of product market saturation in new housing. For the preliminary analysis, DOE used actual data for 2007 for new housing completions and mobile home placements and adopted the projections from *AEO2008* for 2008 to 2030. DOE updated its new housing projections for today's proposed rule using *AEO2009.* DOE estimated replacements using historical shipments data and product retirement functions that it developed from product lifetimes.

AHRI stated that shipments for all of the products dropped considerably in 2008, and this drop will change the forecast since today's new house installation is tomorrow's replacement installation. (AHRI, No. 33 at p. 2) In response, DOE's NOPR analysis used actual shipments data for 2008, so any such changes are captured in DOE's analysis.

a. Water Heaters

For the preliminary analysis, DOE used information on choice of water heater products in recently-built housing to estimate shipments to the new construction market. DOE assumed the market shares of water heaters using a particular fuel follow the average pattern in new homes for 2000 to 2006 throughout the forecast period. The shipments model assumes that when a unit using a particular fuel is retired, it generally is replaced with a unit that uses the same fuel. Section IV.F.1.d discusses the potential effects of energy conservation standards on choice of water heater product in the new construction and replacement markets.

For its shipments forecast for gas-fired storage water heaters and electric storage water heaters, DOE assumed that the current market shares of small-volume and large-volume products would remain the same throughout the forecast period.

Within the category of gas-fired water heaters, DOE disaggregated the shares of gas storage water heaters and gas-fired instantaneous water heaters based on projections of total shipments of gas-fired instantaneous water heaters. Because there is much uncertainty about the future growth of gas-fired instantaneous water heaters, DOE modeled three scenarios for their market penetration. The scenarios are based on experience with gas-fired instantaneous water heaters in Australia, where the proportion of instantaneous water heaters in total gas-fired storage water heater shipments has grown considerably in the past decade. (See Syneca Consulting, Cost-Benefit Analysis: Proposal to Introduce a Minimum Energy Performance Standard for Gas Water Heaters, 2007, Australian Greenhouse Office: Equipment Energy Efficiency Gas Committee.) Residential water heating services and technology in Australia are roughly comparable to those in the United States. Storage water heaters have somewhat lower volume capacities in Australia, but end-use hot water demand also may be lower. Prices of gas-fired instantaneous water heaters in Australia are roughly comparable to prices of gas-fired storage water heaters (excluding installation costs). In the United States, gas-fired instantaneous water heaters currently cost about twice as much as typical 40-gallon gas storage water heaters. Although the price differential in the United States likely will decrease, the specifics of the United States market probably will not duplicate the market in Australia. Nonetheless, DOE believes that the market evolution in Australia provides the most similar model for scenarios for the United States.

AHRI stated that the Australian water heater market has significant differences from the U.S. market because in Australia: (1) Gas water heaters are not the prevalent residential option; (2) many gas water heaters are installed outside; and (3) prices of gas storage water heaters and gas-fired instantaneous water heaters are practically equal. (AHRI, No. 43 at p. 2) Rheem stated that in Australia, most water heaters are installed outdoors, which makes a difference in terms of the venting and total installation cost. (Rheem, Public Meeting Transcript, No. 34.4 at p. 241) A.O. Smith commented that the scenario for low market penetration of gas-fired instantaneous water heaters may be reasonable, but the other two scenarios over-predict the market penetration. (A.O. Smith, No. 37 at p. 7) Noritz stated that Australia is the only market it has identified that could provide any insight into the adoption of gas-fired instantaneous water heaters in the United States. (Noritz, No. 36 at p. 3)

In response, DOE acknowledges the uncertainty associated with basing forecasted market penetration of gas-fired instantaneous water heaters on the Australian experience, but it agrees with Noritz (the largest manufacturer of these products) that there is no other market that could provide a model for forecasting U.S. market penetration. In making use of the Australian experience, DOE took into account some of the differences between the two markets that would tend to cause shipments growth to be lower in the U.S. For further details on the shipments forecast for gas-fired instantaneous water heaters, see chapter 9 of the NOPR TSD.

b. Direct Heating Equipment

To estimate historical shipments of direct heating equipment for the preliminary analysis, DOE used two sets of data from AHRI and information from the 1993 TSD. Data were unavailable to develop separate forecasts of direct heating equipment shipments for replacement and new home installations, so DOE based the forecast on the time series of historical total shipments developed for each product class. To forecast shipments of gas room DHE, shipments of room heaters were held constant at the average level from

2002 to 2005, and gas fireplace shipments (referred to as hearth products DHE in this NOPR) assigned to gas room DHE were held constant at the average from 2002 to 2004. Forecasted floor furnaces shipments follow the downward trend from 2000 to 2007. Total combined shipments of gas wall gravity and gas wall fan DHE were held constant at the average volume from 2002 to 2006. The upward trend seen from 2002 to 2006 was extrapolated into the future for gas wall fan DHE. DOE derived future shipments of gas wall gravity DHE based on the combined shipments of gas wall gravity and gas wall fan DHE and the forecast shipments for the latter. Shipments of gas fireplaces assigned to gas wall fan DHE were kept constant at the average from 2002 to 2004.

Commenting on DOE's forecast, HPBA stated that gas fireplace shipments will likely decrease as opposed to staying level. (HPBA, Public Meeting Transcript, No. 34.4 at p. 258) Apart from a decrease due to the 2008–2009 economic recession, DOE is not aware of reasons why gas fireplace (hearth products) shipments would be expected to decrease, given that the number of U.S. households will continue to increase. However, based on its review of market information, DOE modified its forecast of gas hearth products shipments. The forecast used for the NOPR accounts for the sharp decline in shipments in 2007–2008, but assumes that shipments in the future will approximately follow the trend seen in 1998–2007.

In addition, DOE modified its forecast of gas wall gravity and gas wall fan DHE to better reflect current information. Instead of having different trends for each of these product classes, as in the preliminary analysis, DOE assumed that shipments of each class would stay constant at the 2008 level during the forecast period.

c. Pool Heaters

To forecast pool heater shipments for new construction for the preliminary analysis, DOE multiplied the annual housing starts forecasted for single-family and multi-family housing by the estimated saturation of gas-fired pool heaters in recently built new housing. For replacement pool heaters, DOE used a survival function based on its distribution of product lifetimes to determine when a unit fails. DOE also introduced a market segment representing purchases by existing households that had not owned a pool heater. These first-time owners include existing households that have a pool and those that install one.

In the preliminary analysis, DOE's projected that pool heater shipments would grow significantly from 0.28 million in 2006 to over 0.7 million by 2040. Raypak stated that the slope of the shipments forecast for pool heaters should be consistent with the past 10 years of data, which show that the slope is either constant or decreasing due to economic reasons. It also stated that pool heater new construction shipments are declining because of lot size issues and other restrictions. (Raypak, No. 34.4 at p. 247) EEI stated that projected pool heater shipments are overstated and that DOE should obtain more recent numbers to develop more realistic projections for shipments. (EEI, No. 40 at pp. 5–6) In response, DOE revised the NOPR analysis to account for those households that are not likely to replace their pool heater when it fails due to cost. As a result, the shipments projection shows only modest growth over the analysis period.

d. Impacts of Standards on Shipments

In some of its energy conservation standard rulemakings, DOE has used elasticities to estimate the response of appliance demand (shipments) to changes in the installed cost and operating costs associated with more-efficient appliances. Typically, higher installed costs of more-efficient appliances are projected to cause some consumers to forego purchase of a new product.

In the case of water heaters, however, DOE believes that this approach would not be appropriate because the consumer (or home builder) decision is usually not whether to purchase the product or not, but rather what type of water heater to buy. A water heater is generally not a discretionary purchase. However, to the extent that energy conservation standards result in an increase in the price of a specific type of water heater compared to a competing product, some consumers (or home builders in the case of shipments for new construction) may purchase the competing product. The consumer or builder decision is not solely based on economic factors, as the availability of natural gas plays a key role. Evaluation of this decision requires an assessment of the specific factors that influence it in the context of the two main markets for water heaters, replacements and new homes.

In the preliminary analysis, DOE determined that the greatest potential for product switching would exist in the case of a standard that effectively required an electric heat pump water heater. This type of product often has a substantially higher installed cost than a typical electric resistance storage water heater and is relatively new to consumers and builders. Because the product choice decision partially depends on the relative costs of competing products, DOE considered the following potential combinations of electric and gas-fired storage water heaters that could result from standards: (1) Electric heat pump water heater and a gas-fired storage water heater using natural draft; (2) electric heat pump water heater and a gas-fired storage water heater using a power vent; and (3) electric heat pump water heater and a gas-fired storage water heater using condensing technology. DOE used data from the 2001 RECS to estimate the percentage of households expected to purchase an electric water heater in the base case that could switch to a gas-fired water heater because they had the necessary infrastructure. To estimate how many households that could switch to gas-fired water heaters would do so, DOE considered the difference in installed cost between the gas-fired storage water heater and an electric heat pump water heater in each of the combinations listed above.

DOE did not quantify the potential for switching to gas water heating in the case of a standard that requires 0.95 EF for electric water heaters, as the installed cost is only moderately higher than the baseline electric water heater (0.90 EF), and DOE judged that this would not be sufficient to prompt consumers to consider switching to gas water heating.

ACEEE stated that because builders make the choices that lock in subsequent energy source decisions at the time of construction, converting to a different energy source for water heating is too costly. However, it added that a few consumers in existing houses would choose gas conversion over installing a heat pump water heater. (ACEEE, No. 35 at pp. 6–7) NEEA and NPCC commented that most water heater replacements are on an emergency basis and that there is no convincing argument to include fuel switching in the analysis. (NEEA and NPCC, No. 42 at p. 9)

DOE agrees with the comment from ACEEE but it also notes that not all water heater replacements are on an emergency basis. DOE believes that the cost differential estimated in its analysis suggests that a small fraction of consumers would be likely to switch. For the NOPR, DOE used a similar approach as for the preliminary analysis using data from the 2005 RECS.

Southern stated that many consumers would switch to a gas-fired storage water heater instead of installing a heat

pump water heater even if the installed cost is more, especially if the heat pump water heater would need to be installed in an enclosed interior location. (Southern, No. 50 at p. 4) DOE's approach took detailed account of those situations in which consumers with a failed electric storage water heater would find it less expensive to switch to a gas-fired storage water heater instead of installing a heat pump water heater. In determining which households would switch to a gas-fired storage water heater, the analysis considered the installed costs that consumers might incur if they replaced an electric storage water heater located indoors with a heat pump water heater. (Refer to the discussion of installation costs for heat pump water heaters in section IV.E.2.a.) Given that an interior location may not easily allow the venting required with installing a gas-fired storage water heater, DOE does not believe consumers would switch to a gas-fired storage water heater instead of installing a heat pump water heater if the installed cost of the gas-fired product is higher.

In the NOPR analysis, the fraction of households using an electric storage water heater estimated to switch to a gas-fired storage water heater instead of installing a heat pump water heater ranges from zero with a standard level for gas-fired storage water heaters that requires condensing technology, to 9 percent with a standard level for gas-fired storage water heaters that requires power vent technology.

In the preliminary analysis, DOE concluded that builders who planned to install an electric storage water heater would not switch to gas-fired storage water heaters in the event of a standard that effectively requires heat pump technology. A.O. Smith stated that builders would be unlikely to switch from a heat pump water heater to a gas-fired storage water heater due to the cost of adding gas to the house, and if gas were already supplied to the house, a heat pump water heater would not have been installed. (A.O. Smith, No. 37 at p. 8) DOE agrees that availability of natural gas is the key determining factor for builders. Accordingly, DOE's analysis for the NOPR shows negligible switching in new homes.

EEI stated that there may be a switch from electric storage to electric instantaneous water heaters if DOE adopts a standard level that would require use of heat pump technology for electric storage water heaters. (EEI, No. 40 at p. 5) DOE acknowledges that some households facing extreme structural modifications to accommodate a heat pump water heater may purchase an electric instantaneous water heater instead. However, because such switching requires expensive electrical modification to the home's electrical circuits to accommodate the higher electrical demand of instantaneous water heaters, DOE believes it is an unlikely choice for most households with electric water heating.

With respect to the new construction market, in the preliminary analysis, DOE concluded that builders who planned to install an electric storage water heater would not switch to gas-fired storage water heaters in the event of a standard that effectively requires heat pump technology. A.O. Smith commented that builders would be unlikely to switch from a heat pump water heater to a gas-fired storage water heater due to the cost of adding gas to the house, and if gas had been already supplied to the house, a heat pump water heater would not have been installed. (A.O. Smith, No. 37 at p. 8) DOE agrees that availability of natural gas is the key factor determining water heater choice for home builders. Accordingly, DOE's analysis for the NOPR shows negligible switching in new homes.

Regarding potential switching from gas-fired water heaters to electric water heaters, DOE determined that the cost of replacing an existing gas-fired storage water heater with an electric one is substantial due to the complexity of the installation. Because it takes longer for an electric storage water heater to recover heated capacity, a larger electric tank may be necessary to replace a gas unit. In new construction, if natural gas is available, builders generally will install a gas-fired water heater. Given the above considerations, in both new construction and the replacement market, a large increase in the price of a gas storage water heater compared to an electric storage water heater likely would be necessary to motivate consumers to replace a gas water heater with an electric unit, or to motivate builders to install an electric water heater instead of a gas unit. Because DOE does not envision such a price differential resulting from this rulemaking, it concluded that amended standards would not induce switching from a gas storage water heater to an electric storage water heater.

In its preliminary analysis, DOE did not quantify the potential for switching away from oil-fired water heaters. Bock and EEI stated that DOE should consider fuel and equipment switching impacts of standards on oil-fired equipment. (Bock, No. 53 at p. 1; EEI, No. 40 at pp. 4–5) In response, DOE believes that the price of the oil-fired storage water heater is a minor factor in the fuel choice decision for households with such a water heater. In most cases, a household with an oil-fired storage water heater needing replacement would switch to a gas-fired water heater if gas is available because of the greater convenience and lower cost of gas water heating. Therefore, DOE believes that the moderately higher equipment price that might result from the proposed standard level (5 percent) would have a negligible impact on fuel switching for oil-fired storage water heaters, and DOE did not include such switching in its NOPR analysis.

In its preliminary analysis, DOE did not quantify the potential for switching away from gas-fired instantaneous water heaters due to lack of quantitative information about the factors that shape the purchase decision for this product. However, given that the vast majority of the market (85 percent) is already at the proposed standard level (0.82 EF), there is little reason to expect any switching to storage water heaters as a result of the proposed standard.

For DHE and pool heaters, DOE did not find any data it could use to estimate the extent of switching away from the gas-fired products subject to this rulemaking if energy conservation standards were to result in a significant increase in installed costs. DOE did not receive any comments on its approach for these products, and it maintained the same approach for the NOPR analysis.

In summary, DOE projects that no fuel switching would occur for gas-fired storage, oil-fired storage, and gas-fired instantaneous water heaters. For electric storage water heaters, DOE estimated that a standard that effectively requires heat pump water heaters would result in a decline in shipments ranging from zero to 9 percent, depending on the standard level for gas-fired storage water heaters.

DOE requests comments on its analysis of fuel switching that may result from the proposed standards on water heaters and the other heating products. In particular, DOE requests comments on (1) its general approach, which does not involve price elasticities; (2) its analysis of switching to gas-fired storage water heaters in the case of a standard that effectively requires an electric heat pump water heater; (3) its conclusion that the proposed standards would not induce switching from a gas storage water heater to an electric storage water heater; and (4) its conclusion that the proposed standards would not induce switching for gas-fired instantaneous water heaters, DHE, and pool heaters.

This is identified as issue 15 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.

2. Other Inputs

The following is a discussion of the other inputs to the NIA and any revisions DOE made to those inputs for today's proposed rule.

a. Base-Case Forecasted Efficiencies

A key input to DOE's estimates of NES and NPV is the energy efficiencies that DOE forecasts over time for the base case (without new standards) and each of the standards cases. The forecasted efficiencies represent the annual shipment-weighted energy efficiency of the products under consideration over the forecast period.

For the preliminary analysis, DOE used the SWEFs for 2013 or 2015 as a starting point to forecast the base-case energy efficiency distribution for each product class. To represent the distribution of product energy efficiencies in those years, DOE used the same market shares as in the base case for the LCC analysis. For gas storage water heaters and electric storage water heaters, DOE estimated the distribution of product energy efficiencies in 2015 by accounting for the estimated market impact of the newly established ENERGY STAR efficiency levels for water heaters (see section IV.9.a). The projected trend to 2015 represents an average annual increase in energy efficiency of 0.27 percent for gas-fired storage water heaters and 0.55 percent for electric storage water heaters. DOE applied the above values to estimate the increase in average energy efficiency until the end of the forecast period.

DOE found no quantifiable indications of change in energy efficiencies over time for oil-fired and gas-fired instantaneous water heaters, direct heating equipment, or pool heaters, and it did not receive any comments on this topic. Therefore, for these products, DOE estimated that energy efficiencies remain constant at the 2015 or 2013 level until the end of the forecast period.

For today's proposed rule, DOE maintained the approach described above.

b. Standards-Case Forecasted Efficiencies

For its determination of standards-case forecasted efficiencies, DOE used a ''roll-up'' scenario in the preliminary analysis and the NOPR to establish the SWEF for the year that standards would become effective and subsequent years. In this approach, product energy efficiencies in the base case that do not meet the standards level under consideration would roll up to meet the new standard level. The market share of energy efficiencies that exceed the standard level under consideration would be the same in the standards case as in the base case. Changes over the forecast period match those in the base case. For today's proposed rule, DOE maintained this approach.

c. Annual Energy Consumption

The inputs for determining NES are annual energy consumption per unit, shipments, equipment stock, national annual energy consumption, and site-to-source conversion factors. Because the annual energy consumption per unit depends directly on efficiency, DOE used the SWEFs associated with the base case and each standards case, in combination with the annual energy use data, to estimate the shipment-weighted average annual per-unit energy consumption under the base case and standards cases. The national energy consumption is the product of the annual energy consumption per unit and the number of units of each vintage. This calculation accounts for differences in unit energy consumption from year to year. For today's proposed rule, DOE maintained this approach.

d. Site-to-Source Energy Conversion

To estimate the national energy savings expected from appliance standards, DOE uses a multiplicative factor to convert site energy consumption (at the home or commercial building) into primary or source energy consumption (the energy required to deliver the site energy). These conversion factors account for the energy used at power plants to generate electricity and losses in transmission and distribution, as well as for natural gas losses from pipeline leakage and energy used for pumping. For electricity, the conversion factors vary over time due to projected changes in generation sources (*i.e.,* the power plant types projected to provide electricity to the country). The factors that DOE developed are marginal values, which represent the response of the system to an incremental decrease in consumption associated with appliance standards.

In the preliminary analysis, DOE used annual site-to-source conversion factors based on the version of NEMS that corresponds to *AEO2008.* For today's NOPR, DOE updated its conversion factors based on *AEO2009.* The *AEO* does not provide energy forecasts beyond 2030; DOE used conversion factors that remain constant at the 2030 values throughout the remainder of the forecast period.

In response to a request from the DOE's Office of Energy Efficiency and Renewable Energy (EERE), the National Research Council (NRC) appointed a committee on ''Point-of-Use and Full-Fuel-Cycle Measurement Approaches to Energy Efficiency Standards'' to conduct a study called for in section 1802 of EPACT 2005. The fundamental task before the committee was to evaluate the methodology used for setting energy efficiency standards and to comment on whether site (point-of-use) or source (full-fuel-cycle) measures of energy efficiency better support rulemaking to achieve energy conservation goals. The NRC committee defined site (point-of-use) energy consumption as reflecting the use of electricity, natural gas, propane, and/or fuel oil by an appliance at the site where the appliance is operated. Full-fuel-cycle energy consumption was defined as including, in addition to site energy use, the following: Energy consumed in the extraction, processing, and transport of primary fuels such as coal, oil, and natural gas; energy losses in thermal combustion in power generation plants; and energy losses in transmission and distribution to homes and commercial buildings. (See The National Academies, Board on Energy and Environmental Systems, Letter to Dr. John Mizroch, Acting Assistant Secretary, U.S. DOE, Office of EERE from James W. Dally, Chair, Committee on Point-of-Use and Full-Fuel-Cycle Measurement Approaches to Energy Efficiency Standards, May 15, 2009.)

In evaluating the merits of using point-of-use and full-fuel-cycle measures, the NRC committee noted that DOE uses what the committee referred to as ''extended site'' energy consumption to assess the impact of energy use on the economy, energy security, and environmental quality. The extended site measure of energy consumption includes the generation, transmission, and distribution but, unlike the full-fuel-cycle measure, does not include the energy consumed in extracting, processing, and transporting primary fuels. A majority of members on the NRC committee concluded that extended site energy consumption understates the total energy consumed to make an appliance operational at the site. As a result, the NRC committee's primary general recommendation is for DOE to consider moving over time to use of a full-fuel-cycle measure of energy consumption for assessment of national and environmental impacts, especially levels of greenhouse gas emissions, and to providing more comprehensive information to the

public through labels and other means, such as an enhanced Web site. For those appliances that use multiple fuels (*e.g.,* water heaters), the NRC committee believes that measuring full-fuel-cycle energy consumption would provide a more complete picture of energy used, thereby allowing comparison across many different appliances as well as an improved assessment of impacts. The NRC committee also acknowledged the complexities inherent in developing a full-fuel-cycle measure of energy use and stated that a majority of the committee recommended a gradual transition to that expanded measure and eventual replacement of the currently used extended site measure.

DOE acknowledges that its site-to-source conversion factors do not capture all of the energy consumed in extracting, processing, and transporting primary fuels. DOE also agrees with the NRC committee's conclusion that developing site-to-source conversion factors that capture the energy associated with the extraction, processing, and transportation of primary fuels is inherently complex and difficult. However, DOE has performed some preliminary evaluation of a full-fuel-cycle measure of energy use.

Based on two studies completed by the National Renewable Energy Laboratory (NREL) in 1999 and 2000, DOE estimated the ratio of the energy used upstream to the energy content of the coal or natural gas delivered to power plants. For coal, the NREL analysis considered typical mining practices and mine-to-plant transportation distances, and used data for the State of Illinois. Based on data in this report, the estimated multiplicative factor for coal is 1.08 (*i.e.,* it takes approximately 1.08 units of coal energy equivalent to provide 1 unit of coal to a power plant). A similar analysis of the energy consumed in upstream processes needed to produce and deliver natural gas to a power plant yielded a multiplicative factor of 1.19. (For further information on the NREL studies, please see: Spath, Pamela L., Margaret K. Mann, and Dawn Kerr, Life Cycle Assessment of Coal-fired Power Production, NREL/TP–570–25119, June 1999; and Spath, Pamela L. and Margaret K. Mann, Life Cycle Assessment of a Natural Gas Combined-Cycle Power Generation System, NREL/TP–570–27715, September 2000.)

While the above factors are indicative of the magnitude of the impacts of using full-fuel-cycle measures of energy use, there are two aspects of the problem that warrant further study. The first is the refinement of the estimates of the multiplicative factors, particularly to incorporate regional variation. The second is development of forecasts of the multiplicative factors over the time frames used in the rulemaking analyses, typically ten to fifty years. The second issue, of forecasting how the efficiency factors for various fuels may change over time, has the potential to be quite significant. The existing NEMS forecast of power plant electricity generation by fuel type can be used to estimate the impact of a changing mix of fuels. However, currently NEMS provides no information on potential changes to the relative ease with which the different fuels can be extracted and processed. DOE intends to further evaluate the viability of using full-fuel-cycle measures of energy consumption for assessment of national and environmental impacts of appliance standards.

e. Total Installed Costs and Operating Costs

The total annual installed cost increase is equal to the annual difference in the per-unit total installed cost between the base case and standards cases multiplied by the shipments forecasted in the standards case.

The annual operating cost savings per unit reflect differences in energy, repair, and maintenance costs between the base case and the various standard levels DOE considered. DOE forecasted energy prices for the preliminary analysis are based on *AEO2008.* DOE updated the energy prices for today's proposed rule using forecasts from *AEO2009.*

f. Discount Rates

DOE multiplies monetary values in future years by the discount factor to determine the present value. For the preliminary analysis and today's NOPR, DOE estimated the NPV of appliance consumer benefits using both a 3-percent and a 7-percent real discount rate. DOE uses these discount rates in accordance with guidance provided by the Office of Management and Budget (OMB) to Federal agencies on the development of regulatory analysis (OMB Circular A–4 (Sept. 17, 2003), section E, ''Identifying and Measuring Benefits and Costs''). NRDC stated that a discount rate below 3 percent is warranted for societal benefits. (NRDC, No. 48 at p. 5) OMB Circular A–4 states that when regulation primarily and directly affects private consumption, a lower discount rate is appropriate. ''The alternative most often used is sometimes called the social rate of time preference * * * the rate at which 'society' discounts future consumption flows to their present value.'' (p. 33) It suggests that the real rate of return on long-term government debt may provide a fair approximation of the social rate of time preference, and states that over the last 30 years, this rate has averaged around 3 percent in real terms on a pre-tax basis. It concludes that ''for regulatory analysis, [agencies] should provide estimates of net benefits using both 3 percent and 7 percent.'' (p. 34) DOE finds that the guidance from OMB is reasonable, so it is continuing to use a 3-percent and a 7-percent discount rate for estimating net benefits.

3. Other Inputs

a. Effects of Standards on Energy Prices

In the preliminary analysis, DOE analyzed the potential impact on natural gas prices resulting from amended standards on water heaters and the associated benefits for all natural gas consumers in all sectors of the economy. (DOE did not include natural gas savings from amended standards on DHE and pool heaters in this analysis because they are not large enough to have a noticeable impact.) DOE used NEMS–BT to account for the natural gas savings associated with two scenarios of possible standards, including max-tech efficiency levels. Like other widely used energy-economic models, NEMS incorporates parameters to estimate the changes in energy prices that would result from an increase or decrease in energy demand. The response of price to a decrease in demand is termed the ''inverse price elasticity.'' The overall inverse price elasticity observed in NEMS changes over the forecast period based on the model's dynamics of natural gas supply and demand. DOE calculated the nominal savings in total natural gas expenditures in each year by multiplying the estimated annual change in the average end-user natural gas price by the annual total U.S. natural gas consumption associated with each scenario. DOE then calculated the NPV of the savings in natural gas expenditures for 2015 to 2045 using 3- and 7-percent discount rates for each scenario.

For the NOPR, DOE used the same approach to estimate the benefits of reduced natural gas prices as in the preliminary TSD. However, it analyzed the potential impact on natural gas prices, and the associated benefits for natural gas consumers, resulting from the proposed water heater standards (TSL 4), as well as the other TSLs considered.

NRDC stated that DOE must consider the benefit of reduced natural gas and electricity prices and include it in the NIA. (NRDC, No. 48 at p. 5) ACEEE

stated that DOE must incorporate the impacts of gas and electricity consumption reductions resulting from the standards on energy prices in the primary economic analysis, rather than simply note side studies that DOE did not incorporate into the decision-making process. (ACEEE, No. 35 at p. 8)

DOE reports the results of its analysis of the benefits of reduced natural gas prices associated with standards in chapter 10 of the NOPR TSD, National Impacts Analysis. As discussed therein, when gas prices drop in response to a lower output of existing natural gas production capacity, consumers benefit but producers suffer. In economic terms, the situation represents a benefits transfer to consumers (whose expenditures fall) from producers (whose revenue falls equally). When prices decrease because extraction costs decline, however, consumers and producers both benefit, and the change in natural gas prices represents a net gain to society. Consumers benefit from the lower prices, and producers, whose revenues and costs both fall, are no worse off. Because there is uncertainty about the extent to which the calculated impacts from reduced natural gas prices are a benefits transfer, DOE tentatively concluded that it should not give a heavy weight to this factor in its consideration of the economic justification of standards on heating products.

DOE investigated the possibility of estimating the impact of specific standard levels on electricity prices in its rulemaking for general service fluorescent lamps and incandescent reflector lamps. (See U.S. Department of Energy—Office of Energy Efficiency and Renewable Energy: Energy Conservation Standards for General Service Fluorescent Lamps and Incandescent Reflector Lamps; Proposed Rule, 74 FR 16920, 16978–979 (April 13, 2009).) It found that whereas natural gas markets exhibit a fairly simple chain of agents from producers to consumers, the electric power industry is a complex mix of fuel suppliers, producers, and distributors. While the distribution of electricity is regulated everywhere, its institutional structure varies, and upstream components are more complicated, because the cost of generation differs across the country. For these and other reasons, accurate modeling of the response of electricity prices to a decrease in residential-sector demand due to standards is problematic. Thus, DOE does not plan to estimate the value of potentially reduced electricity costs for all consumers associated with revised standards for heating products.

G. Consumer Subgroup Analysis

In analyzing the potential impact of new or amended standards on individual and commercial consumers, DOE evaluates the impact on identifiable subgroups of consumers that may be disproportionately affected by a national standard level. DOE used RECS data to analyze the potential effect of energy conservation standards on the considered consumer subgroups for selected heating products, as explained below. For gas-fired and electric storage water heaters, and gas wall fan and gas wall gravity DHE, DOE estimated consumer subgroup impacts for low-income households and senior-only households. In addition, for gas-fired and electric storage water heaters, DOE estimated consumer subgroup impacts for households in multi-family housing and households in manufactured homes as well.

DOE did not evaluate consumer subgroup impacts for gas-fired instantaneous water heaters and oil-fired storage water heaters. Gas-fired instantaneous water heaters were excluded from the consumer subgroup analysis due to insufficient data, and oil-fired storage water heaters were excluded due to low product shipments. For direct heating equipment, gas floor DHE and gas room DHE were excluded due to the low and decreasing levels of product shipments. For gas hearth DHE, DOE examined the senior-only subgroup, but did not evaluate the low-income subgroup because the saturation of this product is very small among low-income households due to the high product cost. DOE did not evaluate consumer subgroup impacts for pool heaters because the sample size of the subgroups is too small for meaningful analysis. More details on the consumer subgroup analysis and results can be found in chapter 11 of the NOPR TSD.

H. Manufacturer Impact Analysis

1. Overview

In determining whether an amended energy conservation standard for the three types of heating products subject to this rulemaking is economically justified, the Secretary is required to consider ''the economic impact of the standard on the manufacturers and on the consumers of the products subject to such standard.'' (42 U.S.C. 6295(o)(2)(B)(i)(I)) The statute also calls for an assessment of the impact of any lessening of competition as determined by the Attorney General that is likely to result from the adoption of a standard. (42 U.S.C. 6295(o)(2)(B)(i)(V)) DOE conducted the MIA to estimate the financial impact of amended energy conservation standards on manufacturers of residential water heaters, DHE, and pool heaters, and to assess the impacts of such standards on employment and manufacturing capacity.

The MIA has both quantitative and qualitative aspects. The quantitative part of the MIA relies on the Government Regulatory Impact Model (GRIM), an industry cash-flow model customized for the three heating products covered in this rulemaking. The GRIM inputs characterize each industry's cost structure, shipments, and revenues. This includes information from many of the analyses described above, such as MPCs and MSPs from the engineering analysis and shipment forecasts from the NIA. The key GRIM output is the Industry Net Present Value (INPV), which estimates the value of each industry on the basis of cash flows, expenditures, and investment requirements as a function of TSLs. Different sets of assumptions (scenarios) will produce different results. The qualitative part of the MIA addresses factors such as product characteristics, characteristics of particular firms, and market trends. The qualitative discussion also includes an assessment of the impacts of standards on manufacturer subgroups. The complete MIA is discussed in chapter 12 of the NOPR TSD.

DOE conducted the MIA for the three types of heating products in three phases. Phase 1 (Industry Profile) characterized each industry using data on market shares, sales volumes and trends, pricing, employment, and financial structure. Phase 2 (Industry Cash Flow) focused on each industry as a whole. In this phase, DOE used each GRIM to prepare an industry cash-flow analysis. Using publicly-available information developed in Phase 1, DOE adapted each GRIM's generic structure to perform an analysis of the impacts on residential water heater, directing heating equipment, and pool heater manufacturers due to amended energy conservation standards. In Phase 3 (Subgroup Impact Analysis), DOE conducted interviews with a representative cross-section of manufacturers that produce the majority of residential water heater, DHE, and pool heater sales. During these interviews, DOE discussed engineering, manufacturing, procurement, and financial topics specific to each company, and obtained each manufacturer's view of the industry as a whole. The interviews also provided valuable information that DOE used to evaluate the impacts of amended energy conservation standard on manufacturer

cash flows, manufacturing capacity, and employment levels. Each of these phases is discussed in further detail below.

a. Phase 1: Industry Profile

In Phase 1 of the MIA, DOE prepared a profile of each of the three heating product industries based on the market and technology assessment prepared for this rulemaking. Before initiating the detailed impact studies, DOE collected information on the present and past structure and market characteristics of each industry. This information included market share data, product shipments, manufacturer markups, and the cost structure for various manufacturers. The industry profile includes: (1) Further detail on the overall market and product characteristics; (2) estimated manufacturer market shares; (3) financial parameters such as net plant, property, and equipment, SG&A expenses, cost of goods sold, *etc.;* and (4) trends in the number of firms, market, and product characteristics for the three heating product industries.

The industry profile included a top-down cost analysis of residential water heater, DHE, and pool heater manufacturers that DOE used to derive preliminary financial inputs for the GRIMs (*e.g.,* revenues, depreciation, SG&A, and research and development (R&D) expenses). DOE also used public sources of information to further calibrate its initial characterization of each industry, including Security and Exchange Commission 10–K filings (available at *http://www.sec.gov),* Standard & Poor's stock reports (available at *http://www2.standardandpoors.com*), and corporate annual reports. DOE supplemented this public information with data released by privately held companies.

b. Phase 2: Industry Cash-Flow Analysis

Phase 2 focused on the financial impacts of potential amended energy conservation standards on industries as a whole. More-stringent energy conservation standards can affect manufacturer cash flow in three distinct ways: (1) Create a need for increased investment, (2) raise production costs per unit, and (3) alter revenue due to higher per-unit prices and possible changes in sales volumes. To quantify these impacts in Phase 2 of the MIA, DOE used the GRIMs to perform three cash-flow analyses: one for the residential water heater industry (separated into the impacts on gas-fired and electric storage, oil-fired storage, and gas-fired instantaneous water heaters), one for DHE (separated into the impacts on traditional DHE and gas hearth DHE), and one for gas-fired pool heaters. In performing these analyses, DOE used the financial values derived during Phase 1 and the shipment scenarios used in the NIA.

c. Phase 3: Subgroup Impact Analysis

Using average cost assumptions to develop an industry-cash-flow estimate does not adequately assess differential impacts of amended energy conservation standards among manufacturer subgroups. For example, small manufacturers, niche players, or manufacturers exhibiting a cost structure that largely differs from the industry average could be more negatively affected. DOE used the results of the industry characterization analysis in Phase 1 to group manufacturers that exhibit similar characteristics. The interviews provided valuable information on manufacturer subgroups. During the manufacturer interviews, DOE discussed financial topics specific to each manufacturer and obtained each manufacturer's view of the industry as a whole.

As stated above, DOE reports the MIA impacts by grouping the impacts of certain product classes together. DOE presents the industry impacts by the major product types (gas-fired and electric storage water heaters, oil-fired storage water heaters, gas-fired instantaneous water heaters, traditional DHE, gas hearth DHE, and gas-fired pool heaters). These product groupings represent separate markets that are served by the same manufacturers and are typically produced in the same factories. Once segmented into major product types by industry, DOE was only able to identify one subgroup—small manufacturers.

For its small business manufacturer subgroup analysis, DOE uses the small business size standards published by the Small Business Administration (SBA) to determine whether a company is a ''small business.'' 65 FR 30836, 30848 (May 15, 2000), as amended at 65 FR 53533, 53544 (Sept. 5, 2000) and codified at 13 CFR Part 121). To be categorized as a ''small business,'' a residential water heater, DHE, or pool heater manufacturer and its affiliates may employ a maximum of 500 employees. The 500-employee threshold includes all employees in a business's parent company and any other subsidiaries. Based upon this classification, DOE identified five residential water heater manufacturers, 12 DHE manufacturers, and one small gas-fired pool heater manufacturer that qualify as small businesses per the applicable SBA definition. The small business subgroup is discussed in chapter 12 of the TSD and in section VI.B of today's notice.

2. GRIM Analysis

DOE uses the GRIM to quantify the changes in cash flow that result in a higher or lower industry value. The GRIM analysis uses a standard, annual-cash-flow analysis that incorporates MPCs, MSPs, shipments, and industry financial information as inputs, and models changes in costs, distribution of shipments, product and capital conversion costs, and manufacturer markups that would result from amended energy conservation standards. The GRIM spreadsheet uses the inputs to arrive at a series of annual cash flows, beginning with the base year of the analysis, 2010, and continuing over the analysis period. DOE used the same base year (2010) as the NIA, which is the same year as the announcement of the final rule. DOE used the same analysis period in the MIA as in the NIA. For all rulemakings, DOE considers a 30-year analysis period after the anticipated compliance date of the final rule, which under EPCA means the date after which regulated parties must comply with the requirements of the amended standard. The compliance date of the rulemaking is estimated to be March of 2013 for DHE and pool heaters and March of 2015 for residential water heaters. The analysis period runs from the beginning of 2013 to 2043 for DHE and pool heaters and from the beginning of 2015 to 2045 for residential water heaters.

DOE uses the GRIM to calculate cash flows using standard accounting principles and to compare changes in INPV between the base case and various TSLs (the standards cases). The difference in INPV between the base case and the standards case represents the financial impact of the potential amended energy conservation standard on manufacturers. DOE collected this information from a number of sources, including publicly-available data and manufacturer interviews.

DOE created a separate GRIM for each of the three types of heating products. For today's notice, DOE is structuring separate TSLs for the three heating products. DOE also treats certain product classes within the three heating products separately. For example, DOE created specialized interview guides for different groups of product classes. These interview guides included one for storage water heaters (gas-fired storage, electric storage, and oil-fired storage water heaters), one for gas-fired instantaneous water heaters, one for

traditional DHE (gas wall fan, gas wall gravity, gas floor, and gas room DHE), one for gas hearth DHE, and one for gas-fired pool heaters. DOE grouped product classes made by the same manufacturers and in the same production facilities together. This allowed DOE to better understand the impacts on manufacturers of these product classes.

For example, the TSLs DOE considered for residential water heater packages selected efficiency levels of gas-fired storage, electric storage, oil-fired storage, and gas-fired instantaneous water heaters. The TSLs DOE considered for DHE packages selected efficiency levels for gas wall fan, gas wall gravity, gas floor, gas room, and gas hearth units. Each of the TSLs DOE considered for pool heaters consist of a single efficiency level for gas-fired pool heaters. DOE describes the TSLs in section V.A of today's notice. Because the combinations of TSLs can make it more difficult to discuss the required efficiencies for each product class, DOE presents the MIA results in section V.B.2 of today's notice and chapter 12 of the NOPR TSD by groups of manufacturers that make the covered products. DOE presents the MIA results for gas-fired storage and electric storage water heaters together because manufacturers typically produce both types of water heaters in the same facilities. The MIA results for oil-fired storage and gas-fired instantaneous water heaters are presented separately. The MIA results for DHE are separated into traditional DHE (gas wall fan, gas wall gravity, gas floor, and gas room DHE) and gas hearth DHE. The MIA results for gas-fired pool heaters are also presented separately.

a. GRIM Key Inputs

i. Manufacturer Product Costs

In the MIA, DOE used the MPCs for the three types of heating products at each efficiency level calculated in the engineering analysis, as described in section IV.C and further detailed in chapter 5 of the NOPR TSD. Changes in MPCs can affect revenues and gross margins. For instance, manufacturing a higher-efficiency product is typically more expensive due to the use of more complex components and higher-cost raw materials. For gas-fired storage water heaters, DOE used a weighted average MPC using both standard burner and ultra-low-NO_X burner cost-efficiency curves from the engineering analysis to account for shipments of ultra-low-NO_X water heaters.

ii. Base-Case Shipments Forecast

The GRIM estimates manufacturer revenues based on total unit shipment forecasts and the distribution of these values by efficiency level. Changes in the efficiency mix at each standard level affect manufacturer finances. For this analysis, the GRIM uses the NIA shipments forecasts from 2008 and continuing until the end of the analysis period for each heating product (2045 for residential water heaters and 2043 for DHE and pool heaters). In the shipments analysis, DOE also estimated the distribution of efficiencies in the base case for all product classes. See section IV.F.1 for additional details.

iii. Product and Capital Conversion Costs

Amended energy conservation standards will cause manufacturers to incur one-time conversion costs to bring their production facilities and product designs into compliance. For the MIA, DOE classified these one-time conversion costs into two major groups: (1) Product conversion costs and (2) capital conversion costs. Product conversion costs are one-time investments in research, development, testing, marketing, and other costs focused on making product designs comply with the amended energy conservation standard. Capital conversion costs are one-time investments in property, plant, and equipment to adapt or change existing production facilities so that new product designs can be fabricated and assembled.

DOE assessed the product conversion costs manufacturers would be required to make at each TSL. For residential gas-fired storage water heaters, electric storage water heaters, and gas-fired pool heaters, DOE based most of its estimates of the product conversion costs on information obtained from manufacturer interviews. DOE estimated average industry product conversion costs by weighting the estimates from manufacturers by market share, then extrapolating the interviewed manufacturers' product conversion costs for each product class to account for the market share of companies that were not interviewed. DOE verified the accuracy of these product conversion costs by comparing them to its own estimate of the product development, testing, certification, and retraining effort required by each manufacturer at each TSL. DOE also compared the product conversion costs to the total cost of other recent product development efforts manufacturers have incurred (such as the cost to redesign burners to comply with ultra-low-NO_X requirements). For gas-fired and electric storage water heaters at TSL 5, DOE used the industry-wide product conversion costs for the standard-size volumes at TSL 4. DOE assumed the additional product conversion costs for the large gallon sizes at TSL 5 scaled with the total industry-wide product conversion costs. At TSL 5 for gas-fired and electric storage water heaters, DOE multiplied its estimate for the entire industry to exclusively offer heat pump products at TSL 6 and condensing products at TSL 7 by the percentage of total electric storage and gas-fired storage water heater models that exceed a 55 gallon rated volume (27 percent and 11 percent, respectively).

For oil-fired storage water heaters, gas-fired instantaneous water heaters, and all DHE product classes, DOE did not receive sufficient manufacturer data to serve as the basis for its industry-wide product conversion estimates. For these products, DOE calculated its estimates by reviewing product literature and publically-available information about the efficiency of the existing product lines. DOE used this information to estimate the number of product lines that manufacturers would need to modify or develop at each TSL. DOE also estimated a per-product-line development cost at each efficiency level and assumed these costs represented the product conversion costs for a manufacturer that has to upgrade product lines to meet that TSL. DOE also assumed that that the product development costs increase as the design changes become more complex and if manufacturers do not currently offer products that meet or exceed the required efficiency. DOE calculated the product conversion costs by multiplying its per-line product conversion cost estimate by the number of product lines that manufacturers would need to modify or develop at each TSL. For traditional DHE and gas-fired water heaters, DOE assumed that manufacturers would convert all existing product lines that did not meet the efficiencies required at that TSL. However, for gas hearth DHE DOE assumed that manufacturers would only convert up to 50-percent of their existing product lines that did not meet the required efficiencies. DOE's estimates of the product conversion costs for all of the heating products addressed in this rulemaking can be found in section V.B.2 of today's notice and in chapter 12 of the NOPR TSD.

DOE also evaluated the level of capital conversion costs manufacturers would incur to comply with potential amended energy conservation

standards. During interviews, DOE asked manufacturers to estimate the required capital conversion costs to expand the production of higher-efficiency products or quantify the required tooling and plant changes if product lines meeting the required efficiency level do not exist. For residential gas-fired storage water heaters, electric storage water heaters, and gas-fired pool heaters, DOE based its capital conversion costs for most TSLs on these interviews. DOE verified the accuracy of these capital conversion costs by comparing them to a separate bottoms-up estimate of the number of sub-assembly and assembly lines for each manufacturer and the required tooling changes to each line at each TSL, considering the costs of recent line upgrades. As a final verification, DOE examined what level of capital investments would be required to maintain the historical value for net plant, property, and equipment as a ratio of total revenue. For gas-fired and electric storage water heaters at TSL 5, DOE used the industry-wide capital conversion costs for the standard-size volumes at TSL 4. At TSL 5 DOE also used a separate estimate to calculate the additional capital conversion costs that would be required to manufacture gas-fired condensing water heaters and electric heat pump water heaters for rated storage volumes above 55 gallons. For oil-fired storage water heaters, gas-fired instantaneous water heaters, and DHE, DOE used a bottoms-up approach to estimate the cost of additional production equipment and changes to existing production lines that the industry would require at each TSL. DOE used feedback from manufacturer interviews about the tooling requirements at each efficiency level and product catalogs to estimate the total capital conversion costs for each product category at each TSL.

DOE did not consider the provisions in the American Recovery and Reinvestment Act of 2009, Public Law 111–5, in its estimates of the capital conversion costs for all products. The industrial development bonds and advanced energy project tax credit programs in that Act have not been fully distributed, and there is insufficient information available to do a thorough analysis of their potential impacts. It is also unclear if manufacturers of residential water heaters, DHE, or pool heaters would qualify for these provisions. DOE is not aware of any manufacturers of products covered by this rulemaking being awarded funds from these programs (see *http://www.energy.gov/recovery/* for a list of awardees). Therefore, DOE did not include the bonds or tax credit in its analysis for this NOPR of potential impacts on the three heating product industries. DOE's estimates of the capital conversion costs for all three types of heating products can be found in section V.B.2 of today's notice and in chapter 12 of the NOPR TSD.

b. GRIM Scenarios

i. Residential Water Heater Standards-Case Shipments Forecasts

The GRIM used several residential water heater shipments developed in the NIA. The NIA incorporated different scenarios that account for fuel switching, penetration rates of gas-fired instantaneous water heaters, growth rates of ENERGY STAR products, and economic growth rates. To account for the likely impacts on the water heater industry of amended energy conservation standards, DOE used the main NIA shipment scenario. The main NIA water heater scenario accounted for fuel switching. In this scenario, DOE considered the potential for current users of electric storage water heaters to instead purchase a gas-fired storage water heater replacement if amended energy conservation standard for electric storage water heaters were set at levels that would effectively require the use of heat pumps. The main NIA scenario used the Reference case gas-fired instantaneous water heater market share scenario. Finally, the main NIA scenario used the Reference case economic growth scenario and the moderate rate of efficiency growth scenarios. In all standards-case shipment scenarios, DOE considered that shipments at efficiencies below the projected minimum standard levels would roll up to those efficiency levels in response to amended energy conservation standards. See section IV.F.1 of this NOPR and chapter 10 for more information on the residential water heater standards-case shipment scenarios.

ii. Direct Heating Equipment and Pool Heater Shipment Scenarios

For the DHE and pool heater shipments, DOE used the NIA shipments in the base case and the standards case. DOE also considered that shipments at efficiencies below the projected minimum standard levels in the base case would roll up to those efficiency levels in response to amended energy conservation standards. See section IV.F.1 of this NOPR and chapter 10 of the NOPR TSD for additional details about the shipment scenarios.

iii. Markup Scenarios

In the GRIM, DOE used the MSPs estimated in the engineering analysis for each product class and efficiency level. The MSPs include direct manufacturing production costs (*i.e.,* labor, material, and overhead estimated in DOE's MPCs), all non-production costs (*i.e.,* SG&A, R&D, shipping, and interest), along with profit.

DOE used several standards-case markup scenarios to represent the uncertainty about the potential impacts on prices and profitability following the implementation of amended energy conservation standards. For the three types of heating products, DOE analyzed two markup scenarios: (1) a preservation of return on invested capital scenario, and (2) a preservation of operating profit scenario.

Return on invested capital is defined as net operating profit after taxes divided by the total invested capital (fixed assets and working capital, or net plant, property, and equipment plus working capital). In the preservation of return on invested capital scenario, the manufacturer markups are set so that the return on invested capital the year after the compliance date of the amended energy conservation standards is the same as in the base case. This scenario models the situation in which manufacturers maintain a similar level of profitability from the investments required by amended energy conservation standards as they do from their current business operations. After standards, manufacturers have higher net operating profits but also greater working capital and investment requirements. Because manufacturers earn additional operating profit from the investments required by the amended energy conservation standards, this scenario represents the high bound to profitability following standards.

During interviews, multiple manufacturers stated that the higher production costs could severely harm profitability. Because of the highly competitive market, several manufacturers suggested that the additional costs required at higher efficiencies could not be fully passed through to customers. In the preservation of operating profit markup scenario, manufacturer markups are lowered so that only the total operating profit in absolute dollars is maintained as before the amended energy conservation standard. DOE implemented this scenario in GRIM by lowering the manufacturer markups at each TSL to yield approximately the same earnings before interest and taxes in the standards case in the year after

the compliance date of the amended standards, as in the base case. This scenario represents the lower bound of industry profitability following amended energy conservation standards because higher production costs and the investments required to comply with the amended energy conservation standard do not yield additional operating profit.

3. Discussion of Comments

During the February 2009 public meeting, interested parties commented on the assumptions and results of the preliminary analysis. In oral and written comments, interested parties discussed the effects of the current economic downturn on manufacturers, the high costs required to educate installers and service contractors, and potential employment impacts due to amended energy conservation standards. DOE addresses these comments below. DOE also received comments on the cumulative burden of ultra-low-NO_X requirements, which are addressed in sections IV.C and V.B.2.f.

a. Responses to General Comments

AHRI stated that DOE must take into account the impacts of the current economic conditions on the manufacturing industry in the manufacturer impact analysis. (AHRI, Public Meeting Transcript, No. 34.4 at p. 19)

In the MIA, DOE models the impacts of amended energy conservation standards on manufacturers of residential water heaters, DHE, and pool heaters from the base year to the end of the analysis period (*i.e.,* 2010–2045 for residential water heaters and 2010–2043 for DHE and pool heaters). DOE notes the compliance dates for all three heating products (*i.e.,* 2015 for residential water heaters and 2013 for DHE and pool heaters). Using information that only reflects these three industries during the current economic downturn would not be representative of the three heating products over the entire analysis period. DOE used the most current information that is publicly available in many of its estimates and analyses, inputs that take the current economic downturn into consideration. For example, as described in section IV.C.4.b, DOE uses 5-year averages for metal material prices and up-to-date prices for other raw materials and purchased components in its engineering analysis cost models. For today's notice, DOE also updated many of its LCC and NIA assumptions to better reflect the most recent information (*e.g., AEO2009*) and in response to comments from interested parties (sections IV.E and IV.F). For the MIA, DOE uses financial parameters like standard R&D to model the cash-flow impacts on the water heater, DHE, and pool heater industries. To calculate the estimates of the financial parameters used in the GRIMs, DOE examined 6 years of SEC 10–K data. While DOE updated some of these GRIM estimates based on interviews with manufacturers, these changes were made to better reflect the parameters that are representative of each industry over the long-term and are not specifically attributable to current economic conditions.

b. Water Heater Comments

BWC and AHRI stated that the economic downturn has limited the funding available for R&D and the tooling necessary to develop and manufacture more-efficient products. (BWC, No. 46 at p. 3; AHRI, No. 33 at p. 1) Noritz America Corporation also stated that the economy has greatly affected manufacturers' bottom line and ability to support R&D. (Noritz, No. 36 at p. 3)

For today's notice, DOE includes the capital and product conversion costs that would be required to meet the entire industry demand at each TSL. While DOE agrees that the current economic downturn may affect the funding for R&D and capital expenditures in the near term, DOE notes that the compliance date for the residential water heater standard is 2015. In the GRIM, DOE allocates its estimates of the product conversion and capital conversion costs in between the announcement of the final rule adopting energy conservation standard (estimated to be March 2010) and the compliance date requiring compliance with the energy conservation standards for water heaters. DOE also assumes that more of the capital conversion and product conversion costs will occur closer to the compliance date than the announcement date. Because most of the product conversion and capital conversion costs are allocated several years in the future, it is expected that the economic conditions at that time will be different than they are currently.

BWC argued that as new technologies are developed, manufacturers must incur additional costs to educate installers and service contractors. (BWC, No. 46 at p. 3)

DOE agrees with BWC that a higher energy conservation standard could require manufacturers to incur costs to educate installers and service contractors, especially if the products have to change dramatically to accommodate amended energy conservation standards. During interviews, manufacturers indicated that significant resources are required to educate installers and service contractors when a new product is introduced. The resources required are even greater when the new product involves a new technology or a new mode of operation. For example, an energy conservation standard that eliminates atmospheric gas-fired storage water heaters would have such an impact on manufacturers. Product conversion costs are one-time investments which encompass research, development, testing, and marketing, focused on making product designs comply with the amended energy conservation standard. Hence, DOE includes an estimate of the cost to manufacturers to educate installers and service contractors in the product conversion costs at each TSL.

Bock asserted that the ENERGY STAR program will affect consumer purchasing patterns. Bock commented that ENERGY STAR, which ignored oil-fired storage water heaters, caused a loss of market share, a reduction in shipments, and a decrease in employment for oil-fired storage water heater manufacturers. (Bock, No. 53 at p. 3)

DOE agrees that a reduction in oil-fired storage water heater shipments could affect employment at oil-fired manufacturers' plants. However, DOE does not believe that the proposed energy conservation standard will cause a reduction in oil-fired storage water heater shipments. For example, today's proposed energy conservation standards increase the installed price of electric storage water heaters, gas storage water heaters, and instantaneous gas-fired water heaters by roughly $132, $101, and $588, respectively over the current baseline products. The installed cost of an oil-fired storage water heater increases by only $61. DOE does not believe that these minimum price increases for consumers would distort the market such that consumers would elect to replace oil-fired storage water heaters with another type of water heater. DOE addresses the direct employment impacts due to standards in section V.B.2.d.

4. Manufacturer Interviews

DOE interviewed manufacturers representing over 95 percent of residential storage water heater sales, about 50 percent of gas-fired instantaneous water heater sales, approximately 99 percent of traditional DHE sales (gas wall fan, gas wall gravity, gas floor, and gas room DHE), over 50 percent of gas hearth DHE sales, and

about 75 percent of pool heater sales. These interviews were beyond those DOE conducted as part of the engineering analysis. DOE used these interviews to tailor each GRIM to incorporate unique financial characteristics for each industry. DOE contacted companies from its database of manufacturers, which provided a representative sample of each industry. All interviews provided information that DOE used to evaluate the impacts of potential amended energy conservation standards on manufacturer cash flows, manufacturing capacities, and employment levels.

Before each telephone interview or site visit, DOE provided company representatives with an interview guide that included the topics for which DOE sought input. The MIA interview topics included: (1) Key issues to this rulemaking; (2) a company overview and organizational characteristics; (3) manufacturer production costs and selling prices; (4) manufacturer markups and profitability; (5) shipment projections and market shares; (6) product mix; (7) financial parameters; (8) conversion costs; (9) cumulative regulatory burden; (10) direct employment impact assessment; (11) exports, foreign competition, and outsourcing; (12) consolidation; and (13) impacts on small business. The MIA interview guide for storage water heaters contained three additional sections: (1) Ultra-low-NO_X water heaters; (2) unit shipping methods and associated costs; and (3) alternative energy efficiency equations. Appendix 12A of the NOPR TSD contains the five interview guides DOE used to conduct the MIA interviews.

In the manufacturer interviews, DOE asked manufacturers to describe their major concerns about this rulemaking. The following sections describe the most significant key issues identified by manufacturers. DOE also includes additional concerns in chapter 12 of the TSD. DOE's responses are provided where relevant in today's notice.

a. Storage Water Heater Key Issues

i. Fuel Switching

Gas-fired storage, electric storage, and oil-fired storage water heater manufacturers are concerned that this energy conservation standard rulemaking could cause fuel switching. While most storage water heater manufacturers also sell gas-fired instantaneous water heaters, storage manufacturers are concerned that a more aggressive standard on gas-fired and electric storage units could lower the first cost differential of gas-fired instantaneous water heaters and increase their market penetration. Increased penetration of gas-fired instantaneous water heaters would lower the shipments of storage water heaters, resulting in lower profitability and fewer shipments for manufacturers that focus on storage water heaters, especially if they lose market share to companies that exclusively manufacture instantaneous water heaters.

ii. Ultra-Low-NO_X Requirements

Manufacturers that make gas-fired storage water heaters are concerned about the large product development costs to meet the ultra-low-NO_X requirements in some regions of the Southwest. In particular, manufacturers are concerned that higher energy factors, lower NO_X emissions, and compliance with existing safety regulations are often at odds. Manufacturers also stated that the higher cost of the ultra-low-NO_X gas storage water heaters would hurt consumers in those regions and could cause them to switch to less expensive electric storage units.

iii. Profitability

Manufacturers stated that amended energy conservations standards could affect profitability. At any TSL, manufacturers will be forced to discontinue a certain percentage of their existing products and make potentially significant product and plant modifications. If manufacturers earn a lower markup for more-efficient products after the amended energy conservation standard, their profit margin would decrease. Energy conservation standards could also harm profitability by eliminating up-sell opportunities to more-efficient units that earn a greater absolute profit. Finally, while manufacturers generally agree with DOE's estimate of manufacturer production costs, many noted that their actual product offerings are more segmented into multiple models made at various production locations. Multiple product offerings could make it more difficult to reach the price points DOE calculates. If production costs were higher, markups would be lower than the manufacturer markup DOE assumes and profitability would decrease.

iv. Appropriateness of Heat Pump Water Heaters

Heat pump water heaters are effectively required for all rated storage volumes at TSL 6 and TSL 7 and for a portion of the market at TSL 5 for electric storage water heaters to meet the specified efficiency level. Most electric storage water heater manufacturers disagreed with DOE's decision to include heat pump water heaters in the electric storage water heater product class. In addition, all electric storage water heater manufacturers agreed that this technology is only appropriate for the ENERGY STAR level, not a minimum required efficiency. While many manufacturers intend to or currently are designing heat pump water heaters in response to the ENERGY STAR requirements, manufacturers believe that setting a minimum standard during the design phase is not appropriate and could cause many serious and negative consequences.

Manufacturers listed many reasons why this technology is not ready to be applied across the millions of electric storage water heaters needed to satisfy demand. A significant problem is that heat pump water heaters could not be installed in a large portion of existing homes (*e.g.,* 30 to 40 percent of homes), without incurring tremendous costs for affected consumers to modify their existing structures. The technology also has not been fully developed and has not yet been proven reliable for large-scale manufacturing. Some manufacturers are concerned that any problems that arise with applying the technology across millions of electric storage water heaters that could not be proven by the compliance date of the rule would cause significant harm to their industry due to the anti-backsliding provision in EPCA. Manufacturers stated that other problems could arise with the production of heat pump water heaters if the standard were set at TSL 6 or TSL 7. For example, there is almost no existing capacity to manufacture these water heaters, especially on the scale that an energy conservation standard would require. Requiring over 4 million annual shipments in 2015 could lead to acquisition problems because component suppliers are not prepared for such a jump in demand. In particular, acquiring sufficient compressors, thermal expansion valves, and other purchased parts to meet market demand could be a challenge.

Manufacturers also added that setting the energy conservation standard at a level effectively requiring the use of heat pump technology would cause many negative impacts in the industry, even if the technology were proven by the compliance date specified in the final rule. Because of the increased labor required, manufacturers would have to consider shifting a considerable portion of production overseas to obtain viable production costs, as was true for the residential air-conditioning industry. Domestic employment in the industry

would be affected because only part of the production would likely remain in the United States after the compliance date of the amended energy conservation standard.

Manufacturers also stated that they would incur significant conversion costs if the standard level effectively mandates heat pump water heaters, for the reasons explained below. Every main assembly line and feeder line would need modifications to integrate the new assembly into existing production facilities. Finally, manufacturers would face a significant challenge to retrain their service technicians and installers for a completely new technology. Because the technology has not been fully developed, the skills needed to service and install heat pump water heaters are unknown. However, manufacturers indicated that a combination of plumbing and HVAC skills would be required that do not exist today.

v. Capital Conversion Costs for Oil-Fired Storage Water Heaters

Oil-fired storage water heater manufacturers indicated that capital conversion costs for oil-fired storage water heaters at higher efficiency levels, while perhaps not appearing prohibitively large on a nominal basis, are extremely significant relative to the volume of oil-fired water heater shipments. At any level above TSL 1, at least one manufacturer with substantial market share indicated that there is a real risk that these capital and product conversion costs could cause it to exit the market.

b. Gas-Fired Instantaneous Water Heater Key Issues

i. Potential Market Distortion

Manufacturers stated that amended energy conservation standard could greatly affect the market penetration of gas-fired instantaneous water heaters. If the prices were greatly increased relative to storage water heaters, market penetration could be slowed. In addition, a drastic increase in the required efficiency (at TSL 7) could disrupt current arrangements with overseas suppliers or parent companies and limit product availability in the United States.

ii. Ultra-Low-NO_X Requirements

Manufacturers of gas-fired instantaneous water heaters expressed great concern about the conflicting requirements of higher energy factor requirements and pending ultra-low-NO_X requirements. At most efficiency levels, manufacturers commented that there is a tradeoff in burner design between higher efficiency and lower NO_X emissions. Manufacturers indicated that they have not found a solution and are very concerned about concurrently meeting the ultra-low-NO_X requirements and amended energy conservation standards.

c. Direct Heating Equipment Key Issues (Gas Wall Fan, Gas Wall Gravity, Gas Floor, and Gas Room Direct Heating Equipment)

i. Consumer Impacts

Manufacturers remarked that energy conservation standards could hurt consumers, arguing that many of existing installations cannot be replaced with more-efficient units because of space considerations. Customers that choose these units would either have to pay for structural modifications or switch to a different heat source. Some manufacturers also noted that improvements in efficiency for the most common type of traditional DHE (gas wall gravity DHE) have long paybacks at any TSL.

All manufacturers stated that gas wall gravity and gas room DHE provide a unique utility by operating in the event of a power failure. Manufacturers stated that consumers would be hurt if these products required line power, because it would leave many without a backup source of heat.

ii. Significant Capital and Product Development Costs

Manufacturers stated that any product conversion or capital conversion cost would be difficult to justify because of the very low shipment volumes of each product line. Manufacturers remarked that any required investments could force them to reduce their product offerings at best and permanently exit the market at worst. Due to the large number of product offerings that would need to be recertified and/or redesigned, some manufacturers argued that 3 years would not be enough lead time. Finally, because shipment volumes are so low, any investment would significantly add to the final cost of the product, assuming that manufacturers could pass part of the increased cost on to consumers.

Manufacturers are also concerned that higher production costs could drive more consumers to purchase a central system rather than replace their failed direct heating system. If shipments declined at all, manufacturers stated they would be less able to justify the required investment to upgrade products and product lines, which would hurt their industry further. All manufacturers said that potential energy conservation standards are a real threat to their business and could cause them to exit the market completely.

d. Direct Heating Equipment Key Issues (Gas Hearth Direct Heating Equipment)

i. Loss of Aesthetic Appeal for Decorative Products

According to manufacturers, all gas hearth products have an aesthetic function in addition to a heating function. In fact, manufacturers stated that the primary function of most gas hearth products covered by this rulemaking is the ambiance and aesthetic appeal provided by the flame. Gas hearth DHE are used mostly to zone heat when occupants are in close proximity or to supplement a central heating system, but are used as a primary heating source only in very rare cases.

Because gas hearth DHE are mostly decorative items in residences, manufacturers believe that energy conservation standards could have a different impact on their industry than the water heater industry, for example. Gas hearth manufacturers stated that the utility of the other strictly heating products covered by today's rule has little to do with the appearance of the products and would not be impacted at any standard level. For example, the consumer utility from water heaters would not be impacted by amended energy conservation standards as long as hot water is still delivered. However, the relevant manufacturers were greatly concerned that potential energy conversation standards for gas hearth DHE could harm their industry and consumers in qualitative ways, in addition to the direct impacts on industry value. Their customers' needs are related to the size, shape, and appearance of the flame, and for these customers, efficiency is not usually a concern, given such products' low usage patterns. Manufacturers stated that they earn premiums for aesthetic features such as better-looking flames and more attractive masonry, rather than higher efficiency. Multiple manufacturers stated that the yellow flames that consumers look for in a log set depend on a rich gas-to-air mixture, which inherently limits the achievable energy efficiency. Hence, at higher efficiency levels, it becomes more difficult to improve efficiency and maintain a desirable flame color, an impact that is hard to measure and which could have a significant detrimental effect on the industry.

ii. Product Switching and Profitability

Because the aesthetic appeal of the unit and the flame are critical features, manufacturers believed that overly-stringent energy conservation standards could cause customers to switch to non-covered hearth products, such as wood-burning stoves or strictly decorative units, if the energy conservation standards greatly raised prices. Finally, manufacturers stated that a significant portion of gas hearth products are purchased by builders. Because the appearance of the units and the flame are more critical features than efficiency, manufacturers believed that higher costs could cause more builders to purchase strictly decorative products that are not covered by this rulemaking.

Besides higher prices potentially causing a switching to non-covered products, manufacturers were also concerned that higher standards had the potential to lower overall demand for gas hearth products. At higher costs, manufacturers believe that customers would no longer purchase inserts for existing homes or that builders would make gas hearth products in new homes an option rather than a standard feature. Manufacturers also believe that a shrinking market would reduce profits.

e. Pool Heater Key Issues

i. Impacts on Consumers

Manufacturers stated that an amended energy conservation standards set above an efficiency level achievable using atmospheric technology (TSL 3 through TSL 6) could hurt consumers. According to manufacturers, customers would not recoup the initial higher costs with lower utility bills at these TSLs. Because most residential pool heaters are a luxury item with low usage patterns, most customers do not purchase units at TSL 4 and above. Thus, manufacturers stated that more-efficient residential pool heaters are only appropriate in commercial settings (*e.g.,* hotels, gyms) because the higher usage allows such customers to recoup the higher initial costs.

ii. Future Shipment Trends

Manufacturers commented that pool heater shipments follow new housing starts. Because the new housing market is down, manufacturers have lowered their projections for future pool heater sales as well. Manufacturers also do not expect future shipments to return to historical levels, as recent new housing starts have increasingly been on smaller lots that do not have the room to accommodate swimming pools.

Manufacturers are concerned that amended energy conservation standards could further decrease future sales. Because pool heaters are not a necessity, the higher initial cost could dissuade some consumers from replacing a failed unit or adding a heater to a new pool or spa. Manufacturers are also concerned that a higher price point for gas-fired pool heaters could hurt future shipments by making alternatives like solar or heat pump pool heaters comparatively cheaper. Manufacturers stated that this trend is already a concern because a few States and utilities have offered subsidies for solar water heaters.

iii. Future NO_X Emission Requirements

According to manufacturers, residential gas-fired pool heaters are currently exempt from ultra-low NO_X requirements in the Southwest air quality management districts. However, most manufacturers voiced a concern over potential future requirements. If air quality management districts set more restrictive NO_X requirements in the future, some manufacturers may be required to incur a costly redesign of their burner systems.

I. Employment Impact Analysis

Employment impacts consist of direct and indirect impacts. Direct employment impacts are any changes in the number of employees of manufacturers of the appliance products that are the subject of this rulemaking, their suppliers, and related service firms. Indirect employment impacts are changes in employment in the larger economy that occur due to the shift in expenditures and capital investment caused by the purchase and operation of more-efficient appliances. The MIA addresses the direct employment impacts that concern manufacturers of the three heating products.

Indirect employment impacts from standards consist of the net jobs created or eliminated in the national economy, other than in the manufacturing sector being regulated, due to: (1) Reduced spending by end users on energy (electricity, gas—including liquefied petroleum gas—and oil); (2) reduced spending on new energy supply by the utility industry; (3) increased spending on new products to which the new standards apply; and (4) the effects of those three factors throughout the economy. DOE expects the net monetary savings from standards to be redirected to other forms of economic activity. DOE also expects these shifts in spending and economic activity to affect the demand for labor in the short term, as explained below.

One method for assessing the possible effects on the demand for labor of such shifts in economic activity is to compare sectoral employment statistics developed by the Labor Department's Bureau of Labor Statistics (BLS). (Data on industry employment, hours, labor compensation, value of production, and the implicit price deflator for output for these industries are available upon request by calling the Division of Industry Productivity Studies (202–691–5618) or by sending a request by e-mail to *dipsweb@bls.gov.* See *http://www.bls.gov/news.release/prin1.nr0.htm.*) The BLS regularly publishes its estimates of the number of jobs per million dollars of economic activity in different sectors of the economy, as well as the jobs created elsewhere in the economy by this same economic activity. Data from BLS indicate that expenditures in the utility sector generally create fewer jobs (both directly and indirectly) than expenditures in other sectors of the economy. There are many reasons for these differences, including wage differences and the fact that the utility sector is more capital intensive and less labor intensive than other sectors. See Bureau of Economic Analysis, Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II), U.S. Department of Commerce, 1992.

Energy conservation standards have the effect of reducing consumer utility bills. Because reduced consumer expenditures for energy likely lead to increased expenditures in other sectors of the economy, the general effect of efficiency standards is to shift economic activity from a less labor-intensive sector (*i.e.,* the utility sector) to more labor-intensive sectors (*e.g.,* the retail and manufacturing sectors).

In developing the preliminary analysis and today's NOPR, DOE estimated indirect national employment impacts using an input/output model of the U.S. economy called Impact of Sector Energy Technologies (ImSET). ImSET is a spreadsheet model of the U.S. economy that focuses on 188 sectors most relevant to industrial, commercial, and residential building energy use. (See J. M. Roop, M. J. Scott, and R. W. Schultz, *ImSET: Impact of Sector Energy Technologies,* PNNL–15273, Pacific Northwest National Laboratory, 2005). ImSET is a special-purpose version of the ''U.S. Benchmark National Input-Output'' (I–O) model designed to estimate the national employment and income effects of energy-saving technologies. The ImSET software includes a computer-based I–O model with structural coefficients to characterize economic flows among the 188 sectors. ImSET's national economic

I–O structure is based on a 1997 U.S. benchmark table (See Lawson, Ann M., *et al.,* ''Benchmark Input-Output Accounts of the U.S. Economy, 1997,'' Survey of Current Business, Dec. 2002, pp. 19–117.) Chapter 13 of the NOPR TSD presents further details on the employment impact analysis.

J. Utility Impact Analysis

The utility impact analysis included an analysis of the potential effects of amended energy conservation standards for the three types of heating products on the electric and gas utility industries. For this analysis, DOE used NEMS–BT to generate forecasts of electricity and natural gas consumption, electricity generation by plant type, and electric generating capacity by plant type. DOE conducts the utility impact analysis as a scenario that departs from the latest *AEO* Reference case. In other words, the energy savings impacts from amended energy conservation standards are modeled using NEMS–BT to generate forecasts that deviate from the *AEO* Reference case. Chapter 13 of the NOPR TSD presents details on the utility impact analysis.

NEEA and NPCC urged DOE to consider the impact of gas-fired instantaneous water heaters on local gas distribution companies' ability to meet hot water demand during peak periods, and the possibility that they may have to invest in shoring up system peak capacity, adding significant upward pressure on rates. (NEEA and NPCC, No. 42 at p. 9) DOE acknowledges that growing use of gas-fired instantaneous water heaters could contribute to peak demand problems, and that higher-efficiency gas-fired instantaneous water heaters could ameliorate the problem. However, DOE currently does not have adequate data to reliably quantify the potential impacts.

K. Environmental Analysis

DOE has prepared a draft environmental assessment (EA) pursuant to the National Environmental Policy Act and the requirements of 42 U.S.C. 6295(o)(2)(B)(i)(VI) and 6316(a) to determine the environmental impacts of the proposed standards. DOE estimated the impacts on power sector emissions of CO_2, NO_X, and Hg using the NEMS–BT model. Because the on-site operation of non-electric heating products requires use of fossil fuels and results in emissions of CO_2, NO_X and sulfur dioxide (SO_2), DOE also accounted for the reduction in these emissions due to standards at the sites where these appliances are used.

1. Impacts of Standards on Emissions

In the EA, NEMS–BT is run similarly to the AEO NEMS, except that heating product energy use is reduced by the amount of energy saved (by fuel type) due to each TSL. The inputs of national energy savings come from the NIA spreadsheet model; the output is the forecasted physical emissions at each TSL. The net benefit of the standard is the difference between emissions estimated by NEMS–BT at each TSL and the AEO Reference Case.

NEMS–BT tracks CO_2 emissions using a detailed module that provides results with broad coverage of all sectors and inclusion of interactive effects. For the preliminary TSD, DOE used *AEO2008.* For today's NOPR, DOE used the *AEO2009* NEMS (stimulus version). For the final rule, DOE intends to revise the emissions analysis using the most current AEO.

DOE has preliminarily determined that SO_2 emissions from affected Electric Generating Units (EGUs) are subject to nationwide and regional emissions cap and trading programs that create uncertainty about the standards' impact on SO_2 emissions. Title IV of the Clean Air Act sets an annual emissions cap on SO_2 for all affected EGUs. SO_2 emissions from 28 eastern States and the District of Columbia (D.C.) are also limited under the Clean Air Interstate Rule (CAIR, published in the **Federal Register** on May 12, 2005. 70 FR 25162 (May 12, 2005), which creates an allowance-based trading program that will gradually replace the Title IV program in those States and DC. (The recent legal history surrounding CAIR is discussed below.) The attainment of the emissions caps is flexible among EGUs and is enforced through the use of emissions allowances and tradable permits. Energy conservation standards could lead EGUs to trade allowances and increase SO_2 emissions that offset some or all SO_2 emissions reductions attributable to the standard. DOE is not certain that there will be reduced overall SO_2 emissions from the standards. The NEMS–BT modeling system that DOE used to forecast emissions reductions currently indicates that no physical reductions in power sector emissions would occur for SO_2. The above considerations prevent DOE from estimating SO_2 reductions from standards at this time.

Even though DOE is not certain that there will be reduced overall emissions from the standard, there may be an economic benefit from reduced demand for SO_2 emission allowances. Electricity savings decrease the generation of SO_2 emissions from power production, which can lessen the need to purchase SO_2 emissions allowance credits, and thereby decrease the costs of complying with regulatory caps on emissions.

Much like SO_2, NO_X emissions from 28 eastern States and the District of Columbia (DC) are limited under the CAIR. Although CAIR has been remanded to EPA by the D.C. Circuit, it will remain in effect until it is replaced by a rule consistent with the Court's July 11, 2008, opinion in *North Carolina* v. *EPA.* 531 F.3d 896 (D.C. Cir. 2008); see also *North Carolina* v. *EPA,* 550 F.3d 1176 (D.C. Cir. 2008). Because all States covered by CAIR opted to reduce NO_X emissions through participation in cap-and-trade programs for electric generating units, emissions from these sources are capped across the CAIR region.

In the 28 eastern States and DC where CAIR is in effect, DOE's forecasts indicate that no NO_X emissions reductions will occur because of the permanent cap. Energy conservation standards have the potential to produce environmentally-related economic impact in the form of lower prices for emissions allowance credits, if they were large enough. However, DOE has preliminarily concluded that the proposed standard would not have such an effect because the estimated reduction in NO_X emissions or the corresponding allowance credits in States covered by the CAIR cap would be too small to affect allowance prices for NO_X under the CAIR.

The proposed standard would reduce NO_X emissions in those 22 States not affected by the CAIR. As a result, DOE used the NEMS–BT to forecast emission reductions from the standards that are considered in today's NOPR.

Similar to emissions of SO_2 and NO_X, future emissions of Hg would have been subject to emissions caps. The Clean Air Mercury Rule (CAMR) would have permanently capped emissions of mercury for new and existing coal-fired plants in all States beginning in 2010 (70 FR 28606). However, the CAMR was vacated by the D.C. Circuit in its decision in *New Jersey* v. *Environmental Protection Agency.* 517 F 3d 574 (D.C. Cir. 2008) Thus, DOE was able to use the NEMS–BT model to estimate the changes in Hg emissions resulting from the proposed rule.

EEI stated that DOE's analysis of emissions from electric power generation should account for the rise in renewable portfolio standards and the possibility of an upcoming CO_2 cap and trade program, both of which would reduce the amount of emissions produced per kWh electricity generated. (EEI, No. 40 at p. 6) DOE's projections

of CO_2 emissions from electric power generation are based on the *AEO2009* version of NEMS. The emissions projections reflect market factors and policies that affect utility choice of power plants for electricity generation, including existing renewable portfolio standards. Because of the speculative nature of forecasting future regulations, DOE does not include the impact of possible future regulations in its forecasts.

EEI stated that if DOE examines changes in power plant emissions, then it should also examine changes in the emissions associated with oil extraction (domestic and overseas), crude oil transportation (sea and land-based), natural gas flaring, oil refining, refined oil delivery, natural gas production, natural gas delivery, natural gas delivery system methane leaks, propane production and delivery, and emissions associated with the extraction and importation of liquefied natural gas. (EEI, No. 40 at p. 6)

Emissions occur at each stage of the extraction, conversion, and delivery of the energy supply chain. Nonetheless, emissions are dominated by power plant emissions in the case of electric appliances and in-house emissions in the case of natural gas and oil-fired appliances, so DOE focuses on those points.

The operation of non-electric heating products requires use of fossil fuels and results in emissions of CO_2, NO_X and SO_2 at the sites where these appliances are used. NEMS–BT provides no means for estimating such emissions. DOE calculated the effect of the proposed standards on the above site emissions based on emissions factors derived from the literature.

2. Valuation of CO_2 Emissions Reductions

DOE received comments on the desirability of valuing the CO_2 emissions reductions that result from standards. NRDC stated that DOE must account for the value of avoided carbon emissions. (NRDC, No. 48 at p. 4) NEEA and NPCC stated that it would be inappropriate to assign a value of zero to avoided carbon emissions. (NEEA and NPCC, No. 42 at p. 10) Earthjustice stated that DOE must consider well-established literature on the value of CO_2 emissions to consider reduced emissions in States that will remain outside CO_2 reduction regimes. (Earthjustice, No. 47 at p. 4)

For today's NOPR, DOE is relying on a new set of values recently developed by an interagency process that conducted a thorough review of existing estimates of the social cost of carbon (SCC). The SCC is intended to be a monetary measure of the incremental damage resulting from greenhouse gas (GHG) emissions, including, but not limited to, net agricultural productivity loss, human health effects, property damages from sea level rise, and changes in ecosystem services. Any effort to quantify and to monetize the harms associated with climate change will raise serious questions of science, economics, and ethics. But with full regard for the limits of both quantification and monetization, the SCC can be used to provide estimates of the social benefits of reductions in GHG emissions.

For at least three reasons, any single estimate of the SCC will be contestable. First, scientific and economic knowledge about the impacts of climate change continues to grow. With new and better information about relevant questions, including the cost, burdens, and possibility of adaptation, current estimates will inevitably change over time. Second, some of the likely and potential damages from climate change—for example, the value society places on adverse impacts on endangered species—are not included in all of the existing economic analyses. These omissions may turn out to be significant in the sense that they may mean that the best current estimates are too low. Third, controversial ethical judgments, including those involving the treatment of future generations, play a role in judgments about the SCC (see in particular the discussion of the discount rate, below).

To date, regulations have used a range of values for the SCC. For example, a regulation proposed by the U.S. Department of Transportation (DOT) in 2008 assumed a value of $7 per ton CO_2 (2006$) for 2011 emission reductions (with a range of $0–14 for sensitivity analysis). Regulation finalized by DOE used a range of $0–$20 (2007$). Both of these ranges were designed to reflect the value of damages to the United States resulting from carbon emissions, or the ''domestic'' SCC. In the final Model Year 2011 Corporate Average Fuel Economy rule, DOT used both a domestic SCC value of $2/t CO_2 and a global SCC value of $33/t CO_2 (with sensitivity analysis at $80/t$CO_2$), increasing at 2.4 percent per year thereafter.

In recent months, a variety of agencies have worked to develop an objective methodology for selecting a range of interim SCC estimates to use in regulatory analyses until improved SCC estimates are developed. The following summary reflects the initial results of these efforts and proposes ranges and values for interim social costs of carbon used in this rule. It should be emphasized that the analysis described below is preliminary. These complex issues are of course undergoing a process of continuing review. Relevant agencies will be evaluating and seeking comment on all of the scientific, economic, and ethical issues before establishing final estimates for use in future rulemakings.

The interim judgments resulting from the recent interagency review process can be summarized as follows: (a) DOE and other Federal agencies should consider the global benefits associated with the reductions of CO_2 emissions resulting from efficiency standards and other similar rulemakings, rather continuing the previous focus on domestic benefits; (b) these global benefits should be based on SCC estimates (in 2007$) of $55, $33, $19, $10, and $5 per ton of CO_2 equivalent emitted (or avoided) in 2007 (in calculating the benefits reported in this NOPR, DOE has escalated the 2007$ values to 2008$ for consistency with other dollar values presented in this notice, resulting in SCC estimates (in 2008$) of approximately $5, $10, $20, $34, and $56); (c) the SCC value of emissions that occur (or are avoided) in future years should be escalated using an annual growth rate of 3 percent from the current values); and (d) domestic benefits are estimated to be approximately 6 percent of the global values. These interim judgments are based on the following considerations.

1. *Global and domestic estimates of SCC.* Because of the distinctive nature of the climate change problem, estimates of both global and domestic SCC values should be considered, but the global measure should be ''primary.'' This approach represents a departure from past practices, which relied, for the most part, on measures of only domestic impacts. As a matter of law, both global and domestic values are permissible; the relevant statutory provisions are ambiguous and allow the agency to choose either measure. (It is true that Federal statutes are presumed not to have extraterritorial effect, in part to ensure that the laws of the United States respect the interests of foreign sovereigns. But use of a global measure for the SCC does not give extraterritorial effect to Federal law and hence does not intrude on such interests.)

It is true that under OMB guidance, analysis from the domestic perspective is required, while analysis from the international perspective is optional. The domestic decisions of one nation are not typically based on a judgment about the effects of those decisions on

other nations. But the climate change problem is highly unusual in the sense that it involves (a) a global public good in which (b) the emissions of one nation may inflict significant damages on other nations and (c) the United States is actively engaged in promoting an international agreement to reduce worldwide emissions.

In these circumstances, the global measure is preferred. Use of a global measure reflects the reality of the problem and is expected to contribute to the continuing efforts of the United States to ensure that emission reductions occur in many nations.

Domestic SCC values are also presented. The development of a domestic SCC is greatly complicated by the relatively few region- or country-specific estimates of the SCC in the literature. One potential estimate comes from the DICE (Dynamic Integrated Climate Economy, William Nordhaus) model. In an unpublished paper, Nordhaus (2007) produced disaggregated SCC estimates using a regional version of the DICE model. He reported a U.S. estimate of $1/tCO_2$ (2007 value, 2007$), which is roughly 11 percent of the global value.

An alternative source of estimates comes from a recent EPA modeling effort using the FUND (Climate Framework for Uncertainty, Negotiation and Distribution, Center for Integrated Study of the Human Dimensions of Global Change) model. The resulting estimates suggest that the ratio of domestic to global benefits varies with key parameter assumptions. With a 3 percent discount rate, for example, the US benefit is about 6 percent of the global benefit for the ''central'' (mean) FUND results, while, for the corresponding ''high'' estimates associated with a higher climate sensitivity and lower global economic growth, the US benefit is less than 4 percent of the global benefit. With a 2 percent discount rate, the U.S. share is about 2 to 5 percent of the global estimate.

Based on this available evidence, a domestic SCC value equal to 6 percent of the global damages is used in this rulemaking. This figure is in the middle of the range of available estimates from the literature. It is recognized that the 6 percent figure is approximate and highly speculative and alternative approaches will be explored before establishing final values for future rulemakings.

2. *Filtering existing analyses.* There are numerous SCC estimates in the existing literature, and it is legitimate to make use of those estimates to produce a figure for current use. A reasonable starting point is provided by the meta-analysis in Richard Tol, ''The Social Cost of Carbon: Trends, Outliers, and Catastrophes, Economics: The Open-Access, Open-Assessment E–Journal,'' Vol. 2, 2008–25. *http://www.economics-ejournal.org/economics/journalarticles/2008-25* (2008). With that starting point, it is proposed to ''filter'' existing SCC estimates by using those that (1) are derived from peer-reviewed studies; (2) do not weight the monetized damages to one country more than those in other countries; (3) use a ''business as usual'' climate scenario; and (4) are based on the most recent published version of each of the three major integrated assessment models (IAMs): FUND, DICE and PAGE (Policy Analysis of the Greenhouse Effect).

Proposal (1) is based on the view that those studies that have been subject to peer review are more likely to be reliable than those that have not been. Proposal (2) is based on a principle of neutrality and simplicity; it does not treat the citizens of one nation differently on the basis of speculative or controversial considerations. Proposal (3) stems from the judgment that as a general rule, the proper way to assess a policy decision is by comparing the implementation of the policy against a counterfactual state where the policy is not implemented. A departure from this approach would be to consider a more dynamic setting in which other countries might implement policies to reduce GHG emissions at an unknown future date, and the United States could choose to implement such a policy now or in the future.

Proposal (4) is based on three complementary judgments. First, the FUND, PAGE, and DICE models now stand as the most comprehensive and reliable efforts to measure the damages from climate change. Second, the latest versions of the three IAMs are likely to reflect the most recent evidence and learning, and hence they are presumed to be superior to those that preceded them. It is acknowledged that earlier versions may contain information that is missing from the latest versions. Third, any effort to choose among them, or to reject one in favor of the others, would be difficult to defend at this time. In the absence of a clear reason to choose among them, it is reasonable to base the SCC on all of them.

The agency is keenly aware that the current IAMs fail to include all relevant information about the likely impacts from greenhouse gas emissions. For example, ecosystem impacts, including species loss, do not appear to be included in at least two of the models. Some human health impacts, including increases in food-borne illnesses and in the quantity and toxicity of airborne allergens, also appear to be excluded. In addition, there has been considerable recent discussion of the risk of catastrophe and of how best to account for worst-case scenarios. It is not clear whether the three IAMs take adequate account of these potential effects.

3. *Use a model-weighted average of the estimates at each discount rate.* At this time, there appears to be no scientifically valid reason to prefer any of the three major IAMs (FUND, PAGE, and DICE). Consequently, the estimates are based on an equal weighting of estimates from each of the models. Among estimates that remain after applying the filter, the average of all estimates within a model is derived. The estimated SCC is then calculated as the average of the three model-specific averages. This approach ensures that the interim estimate is not biased towards specific models or more prolific authors.

4. *Apply a 3 percent annual growth rate to the chosen SCC values.* SCC is assumed to increase over time, because future emissions are expected to produce larger incremental damages as physical and economic systems become more stressed as the magnitude of climate change increases. Indeed, an implied growth rate in the SCC is produced by most studies that estimate economic damages caused by increased GHG emissions in future years. But neither the rate itself nor the information necessary to derive its implied value is commonly reported. In light of the limited amount of debate thus far about the appropriate growth rate of the SCC, applying a rate of 3 percent per year seems appropriate at this stage. This value is consistent with the range recommended by IPCC (2007) and close to the latest published estimate (Hope, 2008).

For climate change, one of the most complex issues involves the appropriate discount rate. OMB's current guidance offers a detailed discussion of the relevant issues and calls for discount rates of 3 percent and 7 percent. It also permits a sensitivity analysis with low rates for intergenerational problems. (''If your rule will have important intergenerational benefits or costs you might consider a further sensitivity analysis using a lower but positive discount rate in addition to calculating net benefits using discount rates of 3 and 7 percent.'') The SCC is being developed within the general context of the current guidance.

The choice of a discount rate, especially over long periods of time, raises highly contested and exceedingly difficult questions of science,

economics, philosophy, and law. See, *e.g.,* William Nordhaus, ''The Challenge of Global Warming (2008); Nicholas Stern, The Economics of Climate Change'' (2007); ''Discounting and Intergenerational Equity'' (Paul Portney and John Weyant, eds., 1999). Under imaginable assumptions, decisions based on cost-benefit analysis with high discount rates might harm future generations—at least if investments are not made for the benefit of those generations. See Robert Lind, ''Analysis for Intergenerational Discounting,'' id. at 173, 176–177. At the same time, use of low discount rates for particular projects might itself harm future generations, by ensuring that resources are not used in a way that would greatly benefit them. In the context of climate change, questions of intergenerational equity are especially important.

Reasonable arguments support the use of a 3 percent discount rate. First, that rate is among the two figures suggested by OMB guidance, and hence it fits with existing National policy. Second, it is standard to base the discount rate on the compensation that people receive for delaying consumption, and the 3 percent rate is close to the risk-free rate of return, proxied by the return on long term inflation-adjusted U.S. Treasury Bonds. (In the context of climate change, it is possible to object to this standard method for deriving the discount rate.) Although these rates are currently closer to 2.5 percent, the use of 3 percent provides an adjustment for the liquidity premium that is reflected in these bonds' returns.

At the same time, other arguments support use of a 5 percent discount rate. First, that rate can also be justified by reference to the level of compensation for delaying consumption, because it fits with market behavior with respect to individuals' willingness to trade off consumption across periods as measured by the estimated post-tax average real returns to private investment (*e.g.,* the S&P 500). In the climate setting, the 5 percent discount rate may be preferable to the riskless rate because it is based on risky investments and the return to projects to mitigate climate change is also risky. In contrast, the 3 percent riskless rate may be a more appropriate discount rate for projects where the return is known with a high degree of confidence (*e.g.,* highway guardrails).

Second, 5 percent, and not 3 percent, is roughly consistent with estimates implied by reasonable inputs to the theoretically derived Ramsey equation, which specifies the optimal time path for consumption. That equation specifies the optimal discount rate as the sum of two components. The first reflects the fact that consumption in the future is likely to be higher than consumption today (even accounting for climate impacts), so diminishing marginal utility implies that the same monetary damage will cause a smaller reduction of utility in the future. Standard estimates of this term from the economics literature are in the range of 3 to 5 percent. The second component reflects the possibility that a lower weight should be placed on utility in the future, to account for social impatience or extinction risk, which is specified by a pure rate of time preference (PRTP). A conventional estimate of the PRTP is 2 percent. (Some observers believe that a principle of intergenerational equity suggests that the PRTP should be close to zero.) It follows that discount rate of 5 percent is within the range of values which are able to be derived from the Ramsey equation, albeit at the low end of the range of estimates usually associated with Ramsey discounting.

It is recognized that the arguments above—for use of market behavior and the Ramsey equation—face objections in the context of climate change, and of course there are alternative approaches. In light of climate change, it is possible that consumption in the future will not be higher than consumption today, and if so, the Ramsey equation will suggest a lower figure. Some people have suggested that a very low discount rate, below 3 percent, is justified in light of the ethical considerations calling for a principle of intergenerational neutrality. See Nicholas Stern, ''The Economics of Climate Change'' (2007); for contrary views, see William Nordhaus, A Question of Balance (2008); Martin Weitzman, ''*Review* of the *Stern Review* on the Economics of Climate Change.'' *Journal of Economic Literature,* 45(3): 703–724 (2007). Additionally, some analyses attempt to deal with uncertainty with respect to interest rates over time; a possible approach enabling the consideration of such uncertainties is discussed below. Richard Newell and William Pizer, ''Discounting the Distant Future: How Much Do Uncertain Rates Increase Valuations?'' J. Environ. Econ. Manage. 46 (2003) 52–71.

The application of the methodology outlined above yields estimates of the SCC that are reported in Table IV.31. These estimates are reported separately using 3 percent and 5 percent discount rates. The cells are empty in rows 10 and 11 because these studies did not report estimates of the SCC at a 3 percent discount rate. The model-weighted means are reported in the final or summary row; they are $33 per tCO_2 at a 3% discount rate and $5 per tCO_2 with a 5% discount rate.

TABLE IV.31—GLOBAL SOCIAL COST OF CARBON ESTIMATES ($/$tCO_2$ IN 2007 IN 2007$), BASED ON 3% AND 5% DISCOUNT RATES*

	Model	Study	Climate scenario	3%	5%
1	FUND	Anthoff *et al.* 2009	FUND default	6	−1
2	FUND	Anthoff *et al.* 2009	SRES A1b	1	−1
3	FUND	Anthoff *et al.* 2009	SRES A2	9	−1
4	FUND	Link and Tol 2004	No THC	12	3
5	FUND	Link and Tol 2004	THC continues	12	2
6	FUND	Guo *et al.* 2006	Constant PRTP	5	−1
7	FUND	Guo *et al.* 2006	Gollier discount 1	14	0
8	FUND	Guo *et al.* 2006	Gollier discount 2	7	−1
			FUND Mean	8.25	0
9	PAGE	Wahba & Hope 2006	A2–scen	57	7
10	PAGE	Hope 2006			7
11	DICE	Nordhaus 2008			8

TABLE IV.31—GLOBAL SOCIAL COST OF CARBON ESTIMATES ($/tCO$_2$ IN 2007 IN 2007$), BASED ON 3% AND 5% DISCOUNT RATES *—Continued

	Model	Study	Climate scenario	3%	5%
Summary			Model-weighted Mean	33	5

*The sample includes all peer reviewed, non-equity-weighted estimates included in Tol (2008), Nordhaus (2008), Hope (2008), and Anthoff *et al.* (2009), that are based on the most recent published version of FUND, PAGE, or DICE and use business-as-usual climate scenarios. All values are based on the best available information from the underlying studies about the base year and year dollars, rather than the Tol (2008) assumption that all estimates included in his review are 1995 values in 1995$. All values were updated to 2007 using a 3 percent annual growth rate in the SCC, and adjusted for inflation using GDP deflator.

DOE used the model-weighted mean values of $33 and $5 per ton (2007$), as these represent the estimates associated with the 3 percent and 5 percent discount rates, respectively. The 3 percent and 5 percent estimates have independent appeal and at this time a clear preference for one over the other is not warranted. These values were then escalated to 2008$ and rounded to $34 and $5. Thus, DOE has also included—and centered its current attention on—the average of the estimates associated with these discount rates, which is approximately $20 (in 2008$). (Based on the $20 global value, the domestic value would be approximately $1 per ton of CO_2 equivalent.)

It is true that there is uncertainty about interest rates over long time horizons. Recognizing that point, Newell and Pizer have made a careful effort to adjust for that uncertainty. See Newell and Pizer, supra. This is a relatively recent contribution to the literature.

There are several concerns with using this approach in this context. First, it would be a departure from current OMB guidance. Second, an approach that would average what emerges from discount rates of 3 percent and 5 percent reflects uncertainty about the discount rate, but based on a different model of uncertainty. The Newell-Pizer approach models discount rate uncertainty as something that evolves over time; in contrast, one alternative approach would assume that there is a single discount rate with equal probability of 3 percent and 5 percent.

Table IV.32 reports on the application of the Newell-Pizer adjustments. The precise numbers depend on the assumptions about the data generating process that governs interest rates. Columns (1a) and (1b) assume that ''random walk'' model best describes the data and uses 3 percent and 5 percent discount rates, respectively. Columns (2a) and (2b) repeat this, except that it assumes a ''mean-reverting'' process. As Newell and Pizer report, there is stronger empirical support for the random walk model.

TABLE IV.32—GLOBAL SOCIAL COST OF CARBON ESTIMATES ($/tCO$_2$ IN 2007 IN 2007$),* USING NEWELL & PIZER ADJUSTMENT FOR FUTURE DISCOUNT RATE UNCERTAINTY**

	Model	Study	Climate scenario	Random-walk model		Mean-reverting model	
				3%	5%	3%	5%
				(1a)	(1b)	(2a)	(2b)
1	FUND	Anthoff *et al.* 2009	FUND default	10	0	7	−1
2	FUND	Anthoff *et al.* 2009	SRES A1b	2	0	1	−1
3	FUND	Anthoff *et al.* 2009	SRES A2	15	0	10	−1
4	FUND	Link and Tol 2004	No THC	20	6	13	4
5	FUND	Link and Tol 2004	THC continues	20	4	13	2
6	FUND	Guo *et al.* 2006	Constant PRTP	9	0	6	−1
7	FUND	Guo *et al.* 2006	Gollier discount 1	14	0	14	0
8	FUND	Guo *et al.* 2006	Gollier discount 2	7	−1	7	−1
			FUND Mean	12	1	9	0
9	PAGE	Wahba & Hope 2006	A2-scen	97	13	63	8
10	PAGE	Hope 2006			13		8
11	DICE	Nordhaus 2008			15		9
Summary			Model-weighted Mean	55	10	36	6

*The sample includes all peer reviewed, non-equity-weighted estimates included in Tol (2008), Nordhaus (2008), Hope (2008), and Anthoff *et al.* (2009), that are based on the most recent published version of FUND, PAGE, or DICE and use business-as-usual climate scenarios. All values are based on the best available information from the underlying studies about the base year and year dollars, rather than the Tol (2008) assumption that all estimates included in his review are 1995 values in 1995$. All values were updated to 2007 using a 3 percent annual growth rate in the SCC, and adjusted for inflation using GDP deflator.

**Assumes a starting discount rate of 3 percent. Newell and Pizer (2003) based adjustment factors are not applied to estimates from Guo *et al.* (2006) that use a different approach to account for discount rate uncertainty (rows 7–8).

The resulting estimates of the social cost of carbon are necessarily greater. When the adjustments from the random walk model are applied, the estimates of the social cost of carbon are $10 and $55 (2007$), with the 5 percent and 3 percent discount rates, respectively. The application of the mean-reverting adjustment yields estimates of $6 and $36 (2007$). Since the random walk model has greater support from the data, DOE also used the SCC values of $10 and $55 (2007$). When escalated to 2008$, these values were approximately $10 and $56.

In summary, in considering the potential global benefits resulting from reduced CO_2 emissions, DOE used values based on a social cost of carbon of approximately $5, $10, $20, $34 and

$56 per metric ton avoided in 2007 (values expressed in 2008$). DOE also calculated the domestic benefits based on a value of approximately $1 per metric ton avoided in 2007. To monetize the CO_2 emissions reductions expected to result from amended standards for heating products in 2013–2045, DOE escalated the above values for 2007 using a three-percent escalation rate. As indicated in the discussion above, estimates of SCC are assumed to increase over time since future emissions are expected to produce larger incremental damages as physical and economic systems become more stressed as the magnitude of climate change increases. Although most studies that estimate economic damages caused by increased GHG emissions in future years produce an implied growth rate in the SCC, neither the rate itself nor the information necessary to derive its implied value is commonly reported. However, applying a rate of 3 percent per year is consistent with the range recommended by IPCC (2007).

DOE recognizes that scientific and economic knowledge about the contribution of CO_2 and other GHG to changes in the future global climate and the potential resulting damages to the world economy continues to evolve rapidly. Thus, any value placed in this rulemaking on CO_2 emissions reduction is subject to change. DOE, together with other Federal agencies, will continue to review various methodologies for estimating the monetary value of reductions in CO_2 and other greenhouse gas emissions. This ongoing review will consider the comments on this subject that are part of the public record for this and other rulemakings, as well as other methodological assumptions and issues. However, consistent with DOE's legal obligations, and taking into account the uncertainty involved with this particular issue, DOE has included in this proposed rule the most recent values and analyses resulting from the ongoing interagency review process.

3. Valuation of Other Emissions Reductions

DOE also investigated the potential monetary benefit of reduced NO_X and Hg emissions from the TSLs it considered. As previously stated, DOE's analysis assumed the presence of nationwide emission caps on SO_2 and caps on NO_X emissions in the 28 States covered by the CAIR. In the presence of these caps, the NEMS–BT modeling system that DOE used to forecast emissions reduction indicated that no physical reductions in power sector emissions would occur for SO_2, but that the standards could put slight downward pressure on the prices of emissions allowances in cap-and-trade markets. Estimating this effect is very difficult because such factors as credit banking can change the trajectory of prices. From its modeling to date, DOE is unable to estimate a benefit from SO_2 emissions reductions at this time. See the environmental assessment in the NOPR TSD for further details.

As noted above, new or amended energy conservation standards would reduce NO_X emissions in those 22 States that are not affected by the CAIR, in addition to the reduction in site NO_X emissions nationwide. DOE estimated the monetized value of NO_X emissions reductions resulting from each of the TSLs considered for today's NOPR based on environmental damage estimates from the literature. Available estimates suggest a very wide range of monetary values, ranging from $370 per ton to $3,800 per ton of NO_X from stationary sources, measured in 2001$ (equivalent to a range of $442 to $4,540 per ton in 2008$). Refer to the OMB, Office of Information and Regulatory Affairs, ''2006 Report to Congress on the Costs and Benefits of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities,'' Washington, DC, for additional information.

For Hg emissions reductions, DOE estimated the monetized values resulting from the TSLs considered for today's NOPR based on environmental damage estimates from the literature. The impact of mercury emissions from power plants on humans is considered highly uncertain. However, DOE identified two estimates of the environmental damage of mercury based on estimates of the adverse impact of childhood exposure to methyl mercury on intelligence quotient (IQ) for American children, and subsequent loss of lifetime economic productivity resulting from these IQ losses. The high-end estimate is based on an estimate of the current aggregate cost of the loss of IQ in American children that results from exposure to mercury of U.S. power plant origin ($1.3 billion per year in 2000$), which works out to $33.3 million per ton emitted per year (2008$). Refer to L. Trasande *et al.,* ''Applying Cost Analyses to Drive Policy that Protects Children,'' 1076 Ann. N.Y. Acad. Sci. 911 (2006) for additional information. DOE's low-end estimate is $0.66 million per ton emitted (in 2004$) or $0.745 million per ton in 2008$. DOE derived this estimate from an evaluation of mercury control that used different methods and assumptions from the first study but was also based on the present value of the lifetime earnings of children exposed. See Ted Gayer and Robert Hahn, ''Designing Environmental Policy: Lessons from the Regulation of Mercury Emissions,'' Regulatory Analysis 05–01, AEI-Brookings Joint Center for Regulatory Studies, Washington, DC (2004). A version of this paper was published in the *Journal of Regulatory Economics* in 2006.

EEI stated that the costs of remediating emissions of CO_2, SO_2, NO_X, and Hg are included in the rates customers pay, so monetizing their values would be double counting. (EEI, No. 40 at p. 6) DOE understands the comment as referring to actions power plant operators take to meet environmental regulations, the costs of which are reflected in electricity rates. With regulations currently in place, revised standards for heating products would result in a reduction in CO_2, NO_X, and Hg emissions by avoiding electricity generation. Because these emissions impose societal costs, their reduction has an economic value that can be estimated.

Earthjustice stated that DOE must calculate and monetize the value of the reductions in emissions of particulate matter (PM) that will result from standards; even if DOE cannot consider secondary PM emissions, it must consider primary emissions. (Earthjustice, No. 47 at p. 5) DOE agrees that PM impacts are of concern due to human exposures that can impact health. But impacts of PM emissions reduction are much more difficult to estimate than other emissions reductions due to the complex interactions between PM, other power plant emissions, meteorology and atmospheric chemistry that impact human exposure to particulates. Human exposure to PM usually occurs at a significant distance from the power plants that are emitting particulates and particulate precursors. When power plant emissions travel this distance they undergo highly complex atmospheric chemical reactions. While the Environmental Protection Agency (EPA) does keep inventories of direct PM emissions of power plants, in its source attribution reviews the EPA does not separate direct PM emissions from power plants from the particulates indirectly produced through complex atmospheric chemical reactions. This is in part because SO_2 emissions react with direct PM emissions particles to produce combined sulfate particulates. Thus it is not useful to examine how the standard impacts direct PM emissions independent of indirect PM production and atmospheric dynamics. DOE is not currently able to run a model that can

make these estimates reliably at the national level.

Earthjustice stated that DOE must consider coming climate change legislation and a national cap on carbon emissions and must account for the effect of the standards in reducing allowance prices. (Earthjustice, No. 47 at p. 4) Because no climate change legislation has been enacted to date, the timing and shape of any national cap on carbon emissions is uncertain at this point. Therefore, DOE did not account for such a cap in its NOPR analysis.

V. Analytical Results

A. Trial Standard Levels

DOE analyzed the benefits and burdens of a number of TSLs for each of the three types of heating products separately. For a given product consisting of several product classes, DOE developed some of the TSLs so that each TSL is comprised of energy efficiency levels from each product class that exhibit similar characteristics. For example, in the case of water heaters, one of the TSLs consists of the max-tech efficiency levels from each product class being considered for this rulemaking. DOE attempted to limit the number of TSLs considered for the NOPR by eliminating efficiency levels that do not exhibit significantly different economic and/or engineering characteristics from the efficiency levels already selected as a TSL. A description of each TSL DOE analyzed for each of the three types of heating products is provided below. While DOE only presents the results for those efficiency levels in TSL combinations in today's NOPR, DOE presents the results for all efficiency levels analyzed in the NOPR TSD. DOE requests comments on the results for all of the efficiency levels since DOE could consider any combination of efficiency levels for the final rule as a result of comments from interested parties.

1. Water Heaters

Table V.1 shows the seven TSLs DOE analyzed for water heaters. Since amended water heater standards would apply to the full range of storage volumes, DOE is presenting the TSLs for water heaters in terms of the energy efficiency equations, rather than only showing the required efficiency level at the representative capacities. As discussed in section IV.C.7, DOE is using the alternative energy-efficiency equations developed in the engineering analysis for the NOPR. DOE is grouping the energy efficiency equations for each of the four water heater product classes to show the benefits and burdens of amended energy conservation standards.

For TSL 1, 2, 3, and 4, DOE is using the rated storage volume divisions and the energy efficiency equations as shown in section IV.C.7, which specify a two-slope approach. TSL 1 consists of the efficiency levels for each product class that are approximately equal to the current shipment-weighted average efficiency. TSL 2 and TSL 3 consist of efficiency levels with slightly higher efficiencies compared to TSL 1 for most of the product classes. TSL 4 represents the maximum electric resistance water heater efficiency across the entire range of storage volumes that DOE analyzed for electric storage water heaters, and the maximum atmospherically vented efficiency across the entire range of storage volumes that DOE analyzed for gas-fired storage water heaters.

For TSL 5, DOE further modified the two-slope approach developed in the engineering analysis. For this TSL, DOE considers a pairing of efficiency levels that would promote the penetration of advanced technologies into the electric and gas-fired storage water heater markets and potentially save additional energy by using a two-slope approach with different requirements for each subsection. Consequently, DOE pairs an efficiency level requiring heat pump technology for large-volume electric storage water heaters with an efficiency level achievable using electric resistance technology for small-volume electric storage water heaters. In addition, DOE pairs an efficiency level requiring condensing technology for large-volume gas storage water heaters with an efficiency level that can be achieved in atmospherically vented gas-fired storage water heaters with increased insulation thickness for small storage volumes.

In addition to pairing different technologies for small and large volume products for TSL 5, DOE also modified the division point between small-volume and large-volume gas-fired and electric storage water heaters. DOE used an analysis of market data to determine the initial division points (see section IV.C.7 for details), which were 60 gallons for gas-fired storage water heaters and 80 gallons for electric storage water heaters. These division points are used to modify the two-slope equations for TSLs 1, 2, 3, and 4 (as well as TSLs 6 and 7, described below). Because DOE pairs two different technologies for consideration as an amended standard in TSL 5, DOE is concerned that manufacturers may attempt to circumvent the increased standards for large-volume water heaters by producing water heaters at volumes just below the division points. As a result, DOE has chosen to modify the division points for TSL 5 to 55 gallons for gas-fired and electric storage water heaters to attempt to mitigate the potential loophole. TSL 5 includes efficiency levels that effectively require heat pump technology for electric storage water heater with rated storage volumes above 55 gallons, and efficiency levels that effectively require condensing technology for gas-fired storage water heaters with rated storage volumes above 55 gallons. Using DOE's shipments model and market assessment, DOE estimated approximately 4 percent of gas-fired storage water heater shipments and 11 percent of models would be subject to the large-volume water heater requirements using the TSL 5 division. Similarly, DOE estimated approximately 9 percent of electric storage water heater shipments and 27 percent of models would be subject to the large volume water heater requirements using the TSL 5 division.

DOE specifically seeks comment on the different approach taken in TSL 5, including the rated storage volume division of 55 gallons between small and large storage volumes for gas-fired and electric storage water heaters at TSL 5. In particular, DOE is interested in comments from interested parties regarding whether DOE should consider an alternative division in the final rule, including (but not limited to), 66 gallons or 75 gallons. In addition, DOE seeks comments regarding whether different divisions should be specified for gas-fired and electric storage water heaters such that a similar percentage of the market is impacted in terms of shipments and/or models.

TSL 6 uses the same divisions as TSL 1, 2, 3, and 4 for gas-fired water heaters. TSL 6 is identical to TSL 4 except DOE is considering a heat pump water heater level for electric storage water heaters across the entire range of storage volumes, which is compatible with ENERGY STAR criteria for electric storage water heaters at the representative rated storage volume. DOE did use a division point for the max-tech energy efficiency equations as described in the engineering analysis. TSL 7 consists of the max-tech efficiency levels for each of the water heater product classes at the time the analysis was developed. TSL 6 and 7 both require efficiency levels that can be met using heat pump technology for electric storage water heaters. TSL 7, however, requires a higher efficiency level than TSL 6, which corresponds to the max-tech efficiency level for the representative rated storage capacity (i.e., 2.2 EF at 50 gallons). TSL 7 also

requires efficiency levels that can be met using condensing technology for gas-fired storage and instantaneous water heaters.

Table V.1 demonstrates the energy efficiency equations and associated two slope divisions for TSLs 1 through 7.

TABLE V.1—TRIAL STANDARD LEVELS FOR RESIDENTIAL WATER HEATERS (ENERGY FACTOR)

Trial standard level	Energy efficiency equation	
TSL 1	For GSWHs with a Rated Storage Volume at or below 60 gallons: EF = 0.675 − (0.0015 × Rated Storage Volume in gallons).	For GSWHs with a Rated Storage Volume above 60 gallons: EF = 0.699 − (0.0019 × Rated Storage Volume in gallons).
	For ESWHs with a Rated Storage Volume at or below 80 gallons: EF = 0.967 − (0.00095 × Rated Storage Volume in gallons).	For ESWHs with a Rated Storage Volume above 80 gallons: EF = 1.013 − (0.00153 × Rated Storage Volume in gallons).
	For OSWHs (over the Entire Rated Storage Volume range): EF = 0.64 − (0.0019 × Rated Storage Volume in gallons).	
	For GIWHs (over the Entire Rated Storage Volume range): EF = 0.82 − (0.0019 × Rated Storage Volume in gallons).	
TSL 2	For GSWHs with a Rated Storage Volume at or below 60 gallons: EF = 0.675 − (0.0012 × Rated Storage Volume in gallons).	For GSWHs with a Rated Storage Volume above 60 gallons: EF = 0.717 − (0.0019 × Rated Storage Volume in gallons).
	For ESWHs with a Rated Storage Volume at or below 80 gallons: EF = 0.966 − (0.0008 × Rated Storage Volume in gallons).	For ESWHs with a Rated Storage Volume above 80 gallons: EF = 1.026 − (0.00155 × Rated Storage Volume in gallons).
	For OSWHs (over the Entire Rated Storage Volume range): EF = 0.66 − (0.0019 × Rated Storage Volume in gallons).	
	For GIWHs (over the Entire Rated Storage Volume range): EF = 0.82 − (0.0019 × Rated Storage Volume in gallons).	
TSL 3	For GSWHs with a Rated Storage Volume at or below 60 gallons: EF = 0.675 − (0.0012 × Rated Storage Volume in gallons).	For GSWHs with a Rated Storage Volume above 60 gallons: EF = 0.717 − (0.0019 × Rated Storage Volume in gallons).
	For ESWHs with a Rated Storage Volume at or below 80 gallons: EF = 0.965 − (0.0006 × Rated Storage Volume in gallons).	For ESWHs with a Rated Storage Volume above 80 gallons: EF = 1.051 − (0.00168 × Rated Storage Volume in gallons).
	For OSWHs (over the Entire Rated Storage Volume range): EF = 0.66 − (0.0019 × Rated Storage Volume in gallons).	
	For GIWHs (over the Entire Rated Storage Volume range): EF = 0.82 − (0.0019 × Rated Storage Volume in gallons).	
TSL 4	For GSWHs with a Rated Storage Volume at or below 60 gallons: EF = 0.675 − (0.0012 × Rated Storage Volume in gallons).	For GSWHs with a Rated Storage Volume above 60 gallons: EF = 0.717 − (0.0019 × Rated Storage Volume in gallons).
	For ESWHs with a Rated Storage Volume at or below 60 gallons: EF = 0.960 − (0.0003 × Rated Storage Volume in gallons).	For ESWHs with a Rated Storage Volume above 60 gallons: EF = 1.088 − (0.0019 × Rated Storage Volume in gallons).
	For OSWHs (over the Entire Rated Storage Volume range): EF = 0.68 − (0.0019 × Rated Storage Volume in gallons).	
	For GIWHs (over the Entire Rated Storage Volume range): EF = 0.82 − (0.0019 × Rated Storage Volume in gallons).	

TABLE V.1—TRIAL STANDARD LEVELS FOR RESIDENTIAL WATER HEATERS (ENERGY FACTOR)—Continued

Trial standard level		
TSL 5	For GSWHs with a Rated Storage Volume at or below 55 gallons: EF = 0.675 − (0.0012 × Rated Storage Volume in gallons).	For GSWHs with a Rated Storage Volume above 55 gallons: EF = 0.831 − (0.00078 × Rated Storage Volume in gallons).
	For ESWHs with a Rated Storage Volume at or below 55 gallons: EF = 0.960 − (0.0003 × Rated Storage Volume in gallons).	For ESWHs with a Rated Storage Volume above 55 gallons: EF = 2.057 − (0.00113 × Rated Storage Volume in gallons).
	For OSWHs (over the Entire Rated Storage Volume range): EF = 0.68 − (0.0019 × Rated Storage Volume in gallons).	
	For GIWHs (over the Entire Rated Storage Volume range): EF = 0.82 − (0.0019 × Rated Storage Volume in gallons).	
TSL 6	For GSWHs with a Rated Storage Volume at or below 60 gallons: EF = 0.675 − (0.0012 × Rated Storage Volume in gallons).	For GSWHs with a Rated Storage Volume above 60 gallons: EF = 0.717 − (0.0019 × Rated Storage Volume in gallons).
	For ESWHs (over the Entire Rated Storage Volume range): EF = 2.057 − (0.00113 × Rated Storage Volume in gallons).	
	For OSWHs (over the Entire Rated Storage Volume range): EF = 0.68 − (0.0019 × Rated Storage Volume in gallons).	
	For GIWHs (over the Entire Rated Storage Volume range): EF = 0.82 − (0.0019 × Rated Storage Volume in gallons).	
TSL 7	For GSWHs (over the Entire Rated Storage Volume range): EF = 0.831 − (0.00078 × Rated Storage Volume in gallons).	
	For ESWHs (over the Entire Rated Storage Volume range): EF = 2.057 − (0.00113 × Rated Storage Volume in gallons).	
	For OSWHs (over the Entire Rated Storage Volume range): EF = 0.74 − (0.0019 × Rated Storage Volume in gallons).	
	For GIWHs (over the Entire Rated Storage Volume range): EF = 0.95 − (0.0019 × Rated Storage Volume in gallons).	

2. Direct Heating Equipment

Table V.2 demonstrates the six TSLs DOE analyzed for DHE. TSL 1 consists of the efficiency levels that are close to the current shipment-weighted average efficiency. TSL 2, TSL 3 and TSL 4 consist of efficiency levels that have gradually higher efficiency than TSL 1. TSL 5 consists of the efficiency levels that include electronic ignition and fan assist (where applicable), and TSL 6 consists of the max-tech efficiency levels.

TABLE V.2—TRIAL STANDARD LEVELS FOR DIRECT HEATING EQUIPMENT (AFUE)

Product class	TSL 1 (percent)	TSL 2 (percent)	TSL 3 (percent)	TSL 4 (percent)	TSL 5 (percent)	TSL 6 (percent)
Gas Wall Fan (over 42,000 Btu/h)	75	76	77	80	75	80
Gas Wall Gravity (over 27,000 and up to 46,000 Btu/h)	66	68	71	71	72	72
Gas Floor (over 37,000 Btu/h)	58	58	58	58	58	58
Gas Room (over 27,000 and up to 46,000 Btu/h)	66	67	68	68	83	83
Gas Hearth (over 27,000 and up to 46,000 Btu/h)	67	67	67	72	72	93

3. Gas-Fired Pool Heaters

Table V.3 shows the six TSLs DOE analyzed for pool heaters. TSL 1 consists of the efficiency level that is close to the current shipment-weighted average efficiency. TSL2 and TSL 3 consist of the efficiency levels that have gradually higher efficiency than TSL 1. TSL 4 is the highest efficiency level with positive NPV. TSL 5 is the highest analyzed non-condensing efficiency level, and TSL 6 consists of the max-tech efficiency level.

TABLE V.3—TRIAL STANDARD LEVELS FOR POOL HEATERS

[Thermal efficiency]

Product class	TSL 1 (percent)	TSL 2 (percent)	TSL 3 (percent)	TSL 4 (percent)	TSL 5 (percent)	TSL 6 (percent)
Gas	81	82	83	84	86	95

B. Economic Justification and Energy Savings

1. Economic Impacts on Consumers

a. Life-Cycle Cost and Payback Period

Consumers affected by new or amended standards usually experience higher purchase prices and lower operating costs. Generally, these impacts are best captured by changes in life-cycle costs and payback period. Therefore, DOE calculated the LCC and PBP for the potential standard levels considered in this rulemaking. DOE's LCC and PBP analyses provided key outputs for each TSL, which are reported by product in Table V.4 through Table V.13, below. In each table, the first two outputs are the average total LCC and the average LCC savings. The next three outputs show the percentage of households where the purchase of a product complying with each TSL would create a net life-cycle cost, no impact, or a net life-cycle savings for the purchaser. The last outputs are the median PBP and the average PBP for the consumer purchasing a design that complies with the TSL. The results for each TSL are relative to the efficiency distribution in the base case (no amended standards).

DOE based its LCC and PBP analyses for heating products on energy consumption under conditions of actual use, whereas it based the rebuttable presumption PBP test on consumption under conditions prescribed by the DOE test procedure, as required by EPCA. (42 U.S.C. 6295(o)(2)(B)(iii))

TABLE V.4—GAS-FIRED STORAGE WATER HEATERS: LCC AND PBP RESULTS

TSL	Energy factor	LCC					Payback period	
		Average LCC 2008$	Average LCC savings 2008$	Households with			Median years	Average years
				Net cost %	No impact %	Net benefit %		
1	0.62	3,369	69	9	22	69	1.4	4.6
2, 3, 4	0.63	3,369	68	15	17	68	2.7	11.6
5	*0.63	3,355	78	16	16	68	3.0	12.1
6	0.67	3,618	−150	67	6	27	20.9	24.6
7	0.80	3,522	−55	62	1	36	14.1	14.2

*For TSL 5, the EF and the results represent shipments-weighted averages f the EFs and results that apply to small- and large-volume water heaters, respectively. For the other TSLs the EF and the results refer to the representative rated volume (40 gal).

TABLE V.5—ELECTRIC STORAGE WATER HEATERS: LCC AND PBP RESULTS

TSL	Energy factor	LCC					Payback period	
		Average LCC 2008$	Average LCC savings 2008$	Households with			Median years	Average years
				Net cost %	No impact %	Net benefit %		
1	0.92	3,372	16	10	32	59	2.8	7.8
2	0.93	3,361	23	11	29	60	3.0	8.0
3	0.94	3,351	32	20	14	66	4.5	8.6
4	0.95	3,342	39	25	10	65	5.8	8.8
5	*1.04	3,306	96	25	10	65	5.9	9.1
6	2.00	3,145	224	45	5	50	8.3	25.9
7	2.20	3,095	273	45	1	54	8.2	21.5

*For TSL 5, the EF and the results represent shipments-weighted averages of the EFs and results that apply to small- and large-volume water heaters, respectively. For the other TSLs the EF and the results refer to the representative rated volume (50 gal).

TABLE V.6 OIL-FIRED STORAGE WATER HEATERS: LCC AND PBP RESULTS

TSL	Energy factor	LCC					Payback period	
		Average LCC 2008$	Average LCC savings 2008$	Households with			Median years	Average years
				Net cost %	No impact %	Net benefit %		
1	0.58	8,616	171	0	69	31	0.7	0.8
2	0.60	8,377	288	0	52	48	0.4	0.3
3, 4, 5, 6	0.62	8,190	395	0	45	55	0.5	0.7
7	0.68	7,863	655	0	7	93	1.4	1.7

TABLE V.7—GAS-FIRED INSTANTANEOUS WATER HEATERS: LCC AND PBP RESULTS

TSL	Energy factor	LCC					Payback period	
		Average LCC 2008$	Average LCC savings 2008$	Households with			Median years	Average years
				Net cost %	No impact %	Net benefit %		
1, 2, 3, 4, 5	0.82	5,409	0	11	85	4	23.5	30.4
6	0.92	5,665	−181	70	15	15	34.1	50.2
7	0.95	5,798	−307	83	6	12	39.5	58.7

TABLE V.8—GAS WALL FAN DHE: LCC AND PBP RESULTS

TSL	AFUE %	LCC					Payback period	
		Average LCC 2008$	Average LCC savings 2008$	Households with			Median years	Average years
				Net cost %	No impact %	Net benefit %		
1, 5	75	6,879	73	3	59	38	3.1	3.1
2	76	6,842	90	5	55	41	3.9	6.7
3	77	6,825	104	30	14	56	6.0	15.0
4, 6	80	6,793	135	44	5	52	9.8	22.6

TABLE V.9—GAS WALL GRAVITY DHE: LCC AND PBP RESULTS

TSL	AFUE %	LCC					Payback period	
		Average LCC 2008$	Average LCC savings 2008$	Households with			Median years	Average years
				Net cost %	No impact %	Net benefit %		
1	66	6,533	25	12	70	18	8.1	14.8
2	68	6,458	83	19	40	41	6.5	10.9
3, 4	71	6,349	192	39	0	61	8.3	14.1
5, 6	72	6,473	68	59	0	41	13.0	26.5

TABLE V.10—GAS FLOOR DHE: LCC AND PBP RESULTS

TSL	AFUE %	LCC					Payback period	
		Average LCC 2008$	Average LCC savings 2008$	Households with			Median years	Average years
				Net cost %	No impact %	Net benefit %		
1, 2, 3, 4, 5, 6	58	7,404	13	25	57	18	14.7	20.4

TABLE V.11—GAS ROOM DHE: LCC AND PBP RESULTS

TSL	AFUE %	LCC					Payback period	
		Average LCC 2008$	Average LCC savings 2008$	Households with			Median years	Average years
				Net cost %	No impact %	Net benefit %		
1	66	7,702	42	19	50	31	8.1	13.4
2	67	7,630	96	19	25	56	4.9	9.4
3, 4	68	7,567	143	20	25	55	5.3	10.2
5, 6	83	6,892	646	26	25	49	7.0	15.2

TABLE V.12—GAS HEARTH DHE: LCC AND PBP RESULTS

TSL	AFUE %	LCC					Payback period	
		Average LCC 2008$	Average LCC savings 2008$	Households with			Median years	Average years
				Net cost %	No impact %	Net benefit %		
1, 2, 3	67	5,195	96	9	51	40	0.0	7.9
4, 5	72	5,388	−70	69	13	17	25.9	77.6
6	93	5,571	−253	81	0	19	37.5	78.2

TABLE V.13—GAS-FIRED POOL HEATERS: LCC AND PBP RESULTS

TSL	Thermal efficiency %	LCC					Payback period	
		Average LCC 2008$	Average LCC savings 2008$	Households with			Median years	Average years
				Net cost %	No impact %	Net benefit %		
1	81	6,383	24	6	64	30	2.5	3.5
2	82	6,395	18	31	46	22	7.4	10.1
3	83	6,395	39	52	24	24	10.6	18.7
4	84	6,461	−13	*59	22	20	13.0	19.5
5	86	7,034	−555	90	6	5	28.6	42.4
6	95	7,809	−1,323	96	1	3	28.1	37.2

*For TSL 4, DOE determined that 14 percent of the consumers will experience a net cost smaller than 2 percent of their total LCC (see chapter 8 of the TSD).

b. Analysis of Consumer Subgroups

For gas-fired and electric storage water heaters, and gas wall fan and gas wall gravity DHE, DOE estimated consumer subgroup impacts for low-income households and senior-only households. In addition, for gas-fired and electric storage water heaters, DOE estimated consumer subgroup impacts for households in multi-family housing and households in manufactured homes as well. (As a reminder and as explained in section IV.6, not all products in this rulemaking were included in DOE's consumer subgroup analysis.)

For gas-fired storage water heaters, the impacts of the proposed standard (0.63 EF) are roughly the same for the senior-only sample and the low-income sample as they are for the full household sample for this product class. For the multi-family sample and the manufactured home sample, the average LCC savings are somewhat lower than they are for the full household sample, and the fraction of households experiencing a cost (negative savings) is higher. In both cases, however, the average LCC savings is positive, and more than half of the households in the identified subgroups would experience an LCC benefit.

For electric storage water heaters, the impacts of the proposed TSL 4 standard (0.95 EF) are roughly the same for the senior-only sample as they are for the full household sample for this product class. The impacts are slightly more negative for the low-income sample, and they are moderately more negative for the multi-family sample and the manufactured home sample. The average LCC savings are −$2 for the latter two subgroups, but in both cases, more than half of the households in the identified subgroups would experience an LCC benefit.

In the case of a standard for electric storage water heaters at TSL 5, which would require 2.0 EF only for large-volume water heaters, the negative subgroup impacts seen in the case of TSL 6 are substantially less because only a small fraction of the households in the subgroups has large-volume water heaters for which the standard would effectively require a heat pump water heater.

In the case of a standard for electric storage water heaters at TSL 6, the average LCC savings are lower for all of the subgroups than for the full household sample for this product class. The multi-family subgroup would experience an average negative LCC savings of $359 (*i.e.,* the average LCC would increase), and three-fourths of the households in the subgroup would experience a net cost. For the other subgroups, the fraction of households that would experience a net cost is close to or just above 50 percent, which is slightly higher than for the full household sample. The impact on the multi-family subgroup is primarily due to the lower hot water use among these households.

For gas wall fan and gas wall gravity DHE, DOE estimated that the impacts of the proposed standards are roughly the same for the senior-only sample and the low-income sample as they are for the full household sample for these product classes.

Chapter 11 of the NOPR TSD presents the detailed results of the consumer subgroup analysis.

TABLE V.14—COMPARISON OF SUBGROUP IMPACTS FOR ELECTRIC STORAGE WATER HEATERS

Subgroup	Average LCC savings (2008$)	Households with net cost (%)	Median payback period (years)
0.95 EF			
Senior-only	38	24	5.3
Low-income	17	29	6.3

TABLE V.14—COMPARISON OF SUBGROUP IMPACTS FOR ELECTRIC STORAGE WATER HEATERS—Continued

Subgroup	Average LCC savings (2008$)	Households with net cost (%)	Median payback period (years)
Multi-family	−2	35	6.8
Mobile Home	−2	34	7.0
All Households	39	25	5.8
2.0 EF			
Senior-only	30	52	9.8
Low-income	143	49	9.3
Multi-family	−359	76	23.8
Mobile Home	81	51	9.6
All Households	224	45	8.3

c. Rebuttable Presumption Payback

As discussed above, EPCA provides a rebuttable presumption that an energy conservation standard is economically justified if the increased purchase cost for a product that meets the standard is less than three times the value of the first-year energy savings resulting from the standard (42 U.S.C. 6295(o)(2)(B)(iii)) DOE's LCC and PBP analyses generate values that calculate the payback period for consumers of potential energy conservation standards, which includes, but is not limited to, the three-year payback period contemplated under the rebuttable presumption test discussed above. However, DOE routinely conducts a full economic analysis that considers the full range of impacts, including those to the consumer, manufacturer, Nation, and environment, as required under 42 U.S.C. 6295(o)(2)(B)(i).

In the present case, DOE calculated a rebuttable presumption payback period for each TSL. Rather than using distributions for input values, DOE used discrete values and, as required by EPCA, based the calculation on the assumptions in the DOE test procedures for the three types of heating products. As a result, DOE calculated a single rebuttable presumption payback value, and not a distribution of payback periods, for each standard level. Table V.15 through Table V.17 show the rebuttable presumption payback periods that are less than 3 years. For gas-fired and electric storage water heaters and gas wall gravity DHE and gas room DHE, there were no payback periods under 3 years.

While DOE examined the rebuttable-presumption criterion, it considered whether the standard levels considered for today's rule are economically justified through a more detailed analysis of the economic impacts of these levels pursuant to 42 U.S.C. 6295(o)(2)(B)(i). The results of this analysis serve as the basis for DOE to definitively evaluate the economic justification for a potential standard level (thereby supporting or rebutting the results of any preliminary determination of economic justification).

TABLE V.15—WATER HEATERS: REBUTTABLE PAYBACK PERIODS

Product class	Energy factor	PBP (years)
Oil-Fired Storage	0.54	1.0
	0.56	0.7
	0.58	0.9
	0.60	0.5
	0.62	0.7
	0.66	1.4
	0.68	1.3
Gas-Fired Instantaneous	0.69	0.9

TABLE V.16—DIRECT HEATING EQUIPMENT: REBUTTABLE PAYBACK PERIODS

Product class	AFUE %	PBP (years)
Gas Wall Fan DHE	75	2.9
	76	2.9
Gas Hearth DHE	67	2.0

TABLE V.17—POOL HEATERS: REBUTTABLE PAYBACK PERIODS

Thermal efficiency %	PBP *years*
79	1.1
81	1.9

2. Economic Impacts on Manufacturers

DOE performed an MIA to estimate the impact of amended energy conservation standards on manufacturers of residential water heaters, DHE, and pool heaters. Chapter 12 of the NOPR TSD explains this analysis in further detail. The tables below depict the financial impacts on manufacturers (represented by changes in INPV) and the conversion costs DOE estimates manufacturers would incur at each TSL. DOE shows the results by grouping product classes made by the same manufacturer and uses the scenarios that show the likely changes in industry value following amended energy conservation standards. In the following discussion, the INPV results refer the difference in industry value between the base case and the standards case that result from the sum of discounted cash flows from the base year (2010) through the end of the analysis period. The results also discuss the difference in cash flow between the base case and the standards case in the year before the compliance date of amended energy conservation standards. This figure gives a representation of how large the required conversion costs are relative to the cash flow generated by the industry in the absence of amended energy conservation standards. In the engineering analysis, DOE presents its findings of the common technology options that achieve the efficiencies for each of the representative product classes. To refer to the description of technology options and the required efficiencies at each TSL, see section IV.C of today's notice.

a. Water Heater Cash-Flow Analysis Results

DOE modeled two different markup scenarios to estimate the potential impacts of amended energy conservation standards on residential water heater manufacturers. To assess the lower end of the range of potential impacts on water heater manufacturers, DOE modeled the preservation of return on invested capital scenario. Besides the impact of the main NIA shipment scenario and the required capital and product conversion costs on INPV, this case models that manufacturers would

maintain the base-case return on invested capital in the standards case. This scenario represents the lower end of the range of potential impacts on manufacturers because manufacturers generate a historical rate of additional operating profit on the physical and financial investments required by energy conservation standards.

To assess the higher end of the range of potential impacts on the residential water heater industry, DOE modeled the preservation of operating profit markup scenario in which higher energy conservation standards result in lower manufacturer markups. This scenario models manufacturers' concerns about the higher costs of more efficient technology harming profitability. The scenario represents the upper end of the range of potential impacts on manufacturers only because no additional operating profit is earned on the investments required the meet the amended energy conservation standards. The results of these scenarios for the residential water heater industry are presented in Table V.18 through Table V.23.

i. Cash-Flow Analysis Results for Gas-Fired and Electric Storage Water Heaters

TABLE V.18—MANUFACTURER IMPACT ANALYSIS FOR GAS-FIRED AND ELECTRIC STORAGE WATER HEATERS—PRESERVATION OF RETURN ON INVESTED CAPITAL MARKUP SCENARIO

	Units	Base case	Trial standard level						
			1	2	3	4	5	6	7
INPV	(2008$ millions)	842.7	838.9	837.7	837.8	839.2	821.8	840.7	905.7
Change in INPV	(2008$ millions)		(3.8)	(5.1)	(4.9)	(3.5)	(20.9)	(2.0)	62.9
	(%)		−0.45%	−0.60%	−0.59%	−0.41%	−2.48%	−0.24%	7.47%
Product Conversion Costs.	(2008$ millions)		11.0	13.2	13.2	13.2	28.9	55.7	72.6
Capital Conversion Costs.	(2008$ millions)		0.0	3.9	3.9	37.1	58.0	69.3	189.2
Total Investment Required.	(2008$ millions)		11.0	17.0	17.0	50.3	86.9	125.0	261.8

TABLE V.19—MANUFACTURER IMPACT ANALYSIS FOR GAS-FIRED AND ELECTRIC STORAGE WATER HEATERS—PRESERVATION OF OPERATING PROFIT MARKUP SCENARIO

	Units	Base case	Trial standard level						
			1	2	3	4	5	6	7
INPV	(2008$ millions)	842.7	830.4	812.0	807.4	$763.9	712.8	$536.9	$305.1
Change in INPV	(2008$ millions)		(12.3)	(30.7)	(35.3)	(78.8)	(129.9)	(305.8)	(537.6)
	(%)		−1.46%	−3.64%	−4.19%	−9.35%	−15.41%	−36.29%	−63.79%
Product Conversion Costs.	(2008$ millions)		11.0	13.2	13.2	13.2	28.9	55.7	72.6
Capital Conversion Costs.	(2008$ millions)		0.0	3.9	3.9	37.1	58.0	69.3	189.2
Total Investment Required.	(2008$ millions)		11.0	17.0	17.0	50.3	86.9	125.0	261.8

TSL 1 represents an improvement in efficiency from the baseline level of 0.59 EF to 0.62 EF for gas-fired storage water heaters for the representative rated storage volume of 40 gallons. For electric storage water heaters TSL 1 represents an improvement in efficiency from the baseline level of 0.90 EF to 0.92 EF for the representative rated storage volume of 50 gallons. At TSL 1, DOE estimates the impacts on INPV to range from −$3.8 million to −$12.3 million, or a change in INPV of −0.45 percent to −1.46 percent. At this level, the industry cash flow is estimated to decrease by approximately 4.8 percent, to $58.1 million, compared to the base-case value of $61.0 million in the year leading up to the standards. Currently, over 75 percent of the gas-fired storage water heaters are sold at the baseline level. However, all manufacturers also offer a full line of gas-fired storage water heaters that meet the gas-fired efficiencies at TSL 1. Although the majority of the electric storage water heater shipments do not meet TSL 1, every manufacturer also offers a full line of electric storage water heaters at or above this level. Because manufacturers have existing products and manufacturers could reach the required efficiencies with relatively minor changes to the foam insulation thickness at TSL 1, manufacturers of gas-fired and electric storage water heaters would have minimal conversion costs at TSL 1. Because the technology required at TSL 1 is similar to the baseline, the INPV impacts are similar for both markup scenarios. It is hence unlikely that TSL 1 would greatly reduce manufacturers' profitability.

TSL 2 represents an improvement in efficiency from the baseline level of 0.59 EF to 0.63 EF for gas-fired storage water heaters for the representative rated storage volume of 40 gallons. For electric storage water heaters, TSL 2 represents an improvement in efficiency from the baseline level of 0.90 EF to 0.93 EF for the representative rated storage volume of 50 gallons. At TSL 2, DOE estimates the impacts on INPV to range from −$5.1 million to −$30.7 million, or a change in INPV of −0.60 percent to −3.64 percent. At this level, the industry cash flow is estimated to decrease by approximately 8.7 percent, to $55.7 million, compared to the base-case value of $61.0 million in the year leading up to the standards. Currently, over 80 percent of the gas-fired storage water heaters sold do not meet TSL 2. At TSL 2, manufacturers are expected to meet the gas-fired efficiency requirements by adding additional insulation to their existing products. The conversion costs at TSL 2 are

relatively minor for gas-fired storage water heaters because most manufacturers have a full line of products at the required efficiency for TSL 2 and only minor changes in the manufacturing process would be required. Although the majority of the electric storage water heater market is below the efficiency specified for electric storage water heaters at TSL 2, more than 28 percent of the market is at or above this level. Manufacturers would have increasing conversion costs for both capital and product conversion for electric storage water heaters to modify production facilities to accommodate the extra insulation required at TSL 2. Because the technology required at TSL 2 is similar to the baseline for gas-fired and electric storage water heaters, however, it is unlikely that TSL 2 would greatly impact manufacturers' profitability.

Similar to TSL 2, TSL 3 represents an improvement in efficiency from the baseline level of 0.59 EF to 0.63 EF for gas-fired storage water heaters for the representative rated storage volume of 40 gallons. Because the efficiency requirements for gas-fired storage water heaters are the same at TSL 3 as at TSL 2, the impacts on manufacturers are the same as at TSL 2 for the gas-fired storage efficiency requirements. There are small impacts on manufacturers to improve the efficiency of the majority of the gas-fired storage shipments from the baseline. However, because these changes are expected to be relatively minor increases to the insulation thickness, the impacts on the industry are not substantial because these changes do not greatly alter the current manufacturing process. TSL 3 represents a further improvement in efficiency for electric storage water heaters from the baseline level of 0.90 EF to 0.94 EF for the representative rated storage volume of 50 gallons. To achieve the efficiency levels for TSL 3, electric storage manufacturers would be expected to further increase tank insulation thickness, with still relatively small conversion costs because many manufacturers already manufacture storage water heaters at TSL 3. DOE estimates the INPV impacts to range from −$4.9 million to −$35.3 million, or a change in INPV of −0.59 percent to −4.19 percent. At this level, the industry cash flow is estimated to decrease by approximately 8.7 percent to $55.7 million, compared to the base-case value of $61.0 million in the year leading up to the standards.

Similar to TSL 2 and TSL 3, TSL 4 represents an improvement in efficiency from the baseline level of 0.59 EF to 0.63 EF for gas-fired storage water heaters for the representative rated storage volume of 40 gallons. Because the efficiency requirements for gas-fired storage water heaters are the same at TSL 4 as at TSL 2 and TSL 3, the impacts on gas-fired manufacturers are the same. There are small impacts on manufacturers to improve the efficiency of the majority of the gas-fired storage shipments from the baseline. However, because these changes are expected to be relatively minor increases to the insulation thickness, the impacts on the industry are not substantial because these changes do not greatly alter the current manufacturing process. TSL 4 represents a further improvement in efficiency from the baseline level of 0.90 EF to 0.95 EF for electric storage water heaters at the representative rated storage volume of 50 gallons. Based on a review of units on the market at these efficiency levels, DOE expects that manufacturers would likely further increase insulation levels. Because not all manufacturers have models at this efficiency currently available on the market, however, DOE expects that electric storage water heater manufacturers would incur higher conversion costs at TSL 4 than at TSL 3. At TSL 4, DOE estimates the INPV impacts to range from −$3.5 million to −$78.8 million, or a change in INPV of −0.41 percent to −9.35 percent. At this level, the industry cash flow is estimated to decrease by approximately 33.2 percent to $40.8 million, compared to the base-case value of $61.0 million in the year leading up to the standards. Only a small number of electric storage water heaters on the market meet the efficiency level for electric storage water heaters required by TSL 4. Electric storage manufacturers would have increasing conversion costs for both capital and product conversion to greatly increase the production of low volume products. The capital conversion costs for electric storage water heaters are more substantial than for gas-fired storage water heaters because each production line would require additional foaming stations to accommodate the greatly increased insulation thicknesses and, due to slower production speeds, adding additional production lines in existing facilities to maintain current shipment volumes. Manufacturers also noted that they were concerned about TSL 4 for electric storage water heaters because of problems with the test procedure that could make it difficult replicate the efficiencies required at this TSL.

TSL 5 has the same efficiency requirements as TSL 4 for gas-fired and electric storage water heaters with rated storage volumes less than 55 gallons. Because the efficiency requirements for gas-fired and electric storage water heaters with rated storage volumes less than 55 gallons are equal to TSL 4, at TSL 5 manufacturers share the same concerns for these rated storage volumes as at TSL 4. However, the efficiency requirements for gas-fired storage water heaters with rated storage volumes greater than 55 gallons effectively require condensing technology, and the efficiency requirements for electric storage water heaters with rated storage volumes greater than 55 gallons effectively require heat pump technology. At TSL 5, DOE estimates the INPV impacts to range from −$20.9 million to −$129.9 million, or a change in INPV of −2.48 percent to −15.41 percent. At this level, the industry cash flow is estimated to decrease by approximately 55.6 percent to $27.1 million, compared to the base-case value of $61.0 million in the year leading up to the standards. The higher, negative impacts on INPV are largely caused by the additional conversion costs required to substantially change the technology commonly used in large size gas-fired and electric storage water heaters today. DOE estimates the approximately 4 percent of gas-fired storage water heater shipments with rated volumes greater than 55 gallons would require an additional $13 million in conversion costs to use condensing technology. DOE estimates the approximately 9 percent of gas-fired storage water heater shipments with rated volumes greater than 55 gallons would require an additional $24 million in conversion costs to use heat pump technology.

Much of the additional capital conversion costs calculated for large volume sizes at TSL 5 involve creating an additional gas-fired and electric assembly line in a facility adjacent to a current production facility. Because high-volume manufacturing facilities are typically arranged for units with similar assembly processes, the more complex technology used for larger rated volumes at TSL 5 could not be accommodated on existing production lines. The estimated product conversion costs at TSL 5 would involve retraining existing service and installation personnel, who have little experience installing and servicing storage water heaters that use these advanced technologies. To minimize unit damage and warranty claims and improve market acceptance, manufacturers would likely have to expend significant additional resources to hire training staff to provide more technical support.

The other portion of the product conversion costs for large rated volumes are the product development effort to redesign existing products. Manufacturers could face constraints regarding the abilities of their engineering teams to develop multiple water heater families at TSL 5, as most engineering departments have limited experience with either technology. At a minimum, the efficiency requirements at TSL 5 would require manufacturers to convert existing commercial condensing gas products for residential use. However, multiple manufacturers would also have to develop completely new platforms in order to remain cost-competitive. Even if a manufacturer were to offer incur these high conversion costs, the high product development and capital conversion costs for a small segment of the overall market make it likely that consumers will have fewer product families to choose from after the compliance date of the final rule.

Even if manufacturers offer gas condensing and electric heat pump water heaters for the large gallon sizes at TSL 5, there could be additional, negative impacts on consumers that could lead to a smaller market for these products. Consumers might no longer purchase water heaters with rated storage volumes above 55 gallons because of substantially higher increased first costs than most products currently on the market, the unfamiliar technologies, and size limitations. Because of these changes in the market, at TSL 5, manufacturers could decide that the demand for residential heat pump and condensing gas water heaters would drop to a point where the high product conversion and capital costs required for a small portion of total shipments are not justified. As a result, manufacturers would no longer manufacture residential storage water heaters at rated storage volumes above 55 gallons. In addition, consumers could be impacted if fewer contractors were willing to install these more complex products, especially if field technicians did not obtain any additional licenses and test equipment that could be required to service heat pump water heaters. These additional requirements would also likely increase installation and service costs beyond current levels since consumers would have fewer servicers/installers to choose from.

Similar to TSL 2 through TSL 4, TSL 6 represents an improvement in efficiency from the baseline level of 0.59 EF to 0.63 EF for gas-fired storage water heaters for the representative rated storage volume of 40 gallons. Similarly, the impacts on manufacturers due to the gas-fired storage efficiencies are relatively minor because the required efficiencies for all volume sizes can likely be met with relatively minor changes to the insulation thickness. For electric storage water heaters, TSL 6 represents an improvement in efficiency from the baseline level of 0.90 EF to 2.0 EF for electric storage water heaters at the representative rated storage volume of 50 gallons. At TSL 6, DOE estimates the impacts on INPV to range from −$2.0 million to −$305.8 million, or a change in INPV of −0.24 percent to −36.29 percent. At TSL 6, the industry cash flow is estimated to decrease by approximately 75.7 percent, to $14.8 million, compared to the base-case value of $61.0 million in the year leading up to the standards. To achieve efficiencies at or above TSL 6 would require the use of heat pumps for electric storage water heaters for all rated volumes, a technology option that has yet to see wide adoption in the U.S. market. The higher expected purchased part content and market pressures would be expected to reduce manufacturer profits margins substantially. Although most electric storage water heater manufacturers indicated that they are in the process of developing heat pump water heaters, all manufacturers believe that an efficiency level that requires heat pump water heater technology is not appropriate as an amended energy conservation standard. Manufacturers stated that they would face substantial costs to switch their entire electric storage water heater production over to heat pump electric storage water heaters. Several manufacturers expect that they will have to buy the heat pump modules from outside vendors since most water heater manufacturers have no experience manufacturing heat pumps and have limited space in their facilities to produce heat pump systems. Multiple manufacturers stated that even if they were to simply buy and integrate heat pump modules, there would be substantial product development and capital conversion costs because present facilities are not adequate to handle the heat pump modules. DOE estimates that manufacturers would incur almost $70 million in capital conversion costs to modify production facilities to exclusively manufacture heat pump electric storage water heaters. These capital conversion cost estimates do not include the cost of building manufacturing capacity to produce the heat pump modules because DOE believes manufacturers will likely purchase these as subassemblies.

Furthermore, manufacturers stated that they would consider moving all or part of their existing production capacity abroad if the energy conservation standard is set at TSL 6 because many manufacturers expect that they would have to redesign their facilities completely to accommodate a minimum energy conservation standard at this TSL. According to these manufacturers, building a new facility entails less business disruption risk than attempting to completely redesign and upgrade existing facilities, and lower labor rates in Mexico and other countries abroad may entice manufacturers to move their production facilities outside of the U.S. In addition, manufacturers are very concerned about the significant number of customers who would face extremely costly installations for electric storage water heater replacements if a standard effectively requiring heat pump technology is mandated. According to manufacturers, a significant percentage of electric storage water heaters are installed in space-constrained environments which cannot accommodate the additional space required for the heat pump module. This is especially true for mobile homes and other consumer sub-groups that use smaller capacity tanks.

Another concern of manufacturers at TSL 6 is the amount of additional training that would be necessary to upgrade the installation, distribution, and maintenance networks on the scale necessary to support an electric storage water heater market that used heat pump technology exclusively. Stated more simply, manufacturers are concerned that the typical installer or repair person would not have the requisite knowledge to troubleshoot or repair heat pump water heaters. Manufacturers also expressed concern about profitability if amendments to the minimum energy conservation standard for electric storage water heaters were to require the use of heat pump technology. An amended energy conservation standard that effectively mandated heat pump technology would completely change the nature of their business. The production costs for an integrated heat pump water heater at the 50-gallon representative rated storage volume are approximately four times the baseline production costs. Specifically, manufacturers believe that because this technology results in much more expensive units than the majority of products on the market today, not all of the increased costs could be passed on to the customer. In addition, the significantly higher production costs

would require an additional $256 million in working capital to purchase significantly more expensive components, carry more costly inventory, and handle higher accounts receivable. DOE estimates that the working capital requirement and conversion costs would cause electric storage water heater manufacturers to incur a total one-time investment of at least $375 million in an electric storage market valued at approximately $311 million. Finally, manufacturers believe it is unlikely that they could earn the same return on these extremely large investments, so profitability would be expected to decrease after the compliance date of the amended energy conservation standards.

TSL 7 represents an improvement in efficiency from the baseline level of 0.59 EF to 0.80 EF for gas-fired storage water heaters for the representative rated storage volume of 40 gallons. TSL 7 represents an improvement in efficiency from the baseline level of 0.90 EF to 2.2 EF for electric storage water heaters at the representative rated storage volume of 50 gallons. At TSL 7, DOE estimates the impacts on INPV to range from $62.9 million to −$537.6 million, or a change in INPV of 7.47 percent to −63.79 percent. At TSL 7, the industry cash flow is estimated to decrease by approximately 171.6 percent, to −$43.7 million, compared to the base-case value of $61.0 million in the year leading up to the standards. Because TSL 7 also requires improved heat pump technology (with additional efficiency-related improvements to both the heat pump module and the water heater tank), electric storage water heater manufacturers shared the same concerns at TSL 7 as they had at TSL 6. Because additional, more-costly improvements to heat pump technology are required, however, electric storage water heater manufacturers were more concerned about the potential for energy conservation standards to greatly disrupt the industry if the amended energy conservation standard were set at TSL 7.

For gas-fired storage water heaters, TSL 7 requires manufacturers to produce fully-condensing gas-fired storage water heaters, which is significantly more complex than the insulation changes required at most lower TSLs. Currently, no manufacturer offers residential gas-fired storage water heaters with condensing technology. Manufacturers would need to redesign their products at the condensing level, which would force manufacturers to incur significant product and capital conversion costs. Some loss in product utility may also occur for units that are presently installed in space-constrained applications because condensing water heaters require greater installation space to accommodate bigger heat exchangers, fully-installed blowers, and other components that non-condensing models do not feature. At the condensing level, manufacturers would be required to purchase substantial tooling to fabricate new coil and tank designs and make changes to all subassembly and main assembly lines. DOE estimates that manufacturers would incur approximately $111 million in capital conversion costs to modify their production facilities. Some gas-fired storage water heater manufacturers stated during interviews that they would consider moving facilities offshore at TSL 7 to take advantage of lower labor costs. In addition, due to the complexity and large size of storage water heaters at this efficiency, manufacturers are concerned that installations will be far more difficult and could force many consumers to pay substantially higher installed costs if their replacement water heater does not fit into their existing space. Manufacturers are also concerned about profitability if standards were set at a level that would effectively require condensing technology. An amended energy conservation standard that effectively mandated condensing gas-fired storage water heaters would completely change the existing structure of the industry. Because this technology results in much more expensive units than the majority of products on the market today, manufacturers argued that not all of the increased costs could be passed on to the customer. In addition, the significantly higher production costs would require at least an additional $145 million in working capital to purchase significantly more expensive components, carry more costly inventory, and handle higher accounts receivable. DOE estimates that the working capital requirement and conversion costs would cause gas-fired storage water heater manufacturers to incur a total one-time investment of at least $276 million in a gas-fired storage market valued at approximately $532 million. While there is a slightly positive impact if manufacturers get the same return on these investments as in the base case, manufacturers believe that they will not earn the same return from the substantially higher capital requirements at TSL 7.

ii. Cash-Flow Analysis Results for Oil-Fired Storage Water Heaters

TABLE V.20—MANUFACTURER IMPACT ANALYSIS FOR OIL-FIRED STORAGE WATER HEATERS—PRESERVATION OF RETURN ON INVESTED CAPITAL MARKUP SCENARIO

	Units	Base case	Trial standard level						
			1	2	3	4	5	6	7
INPV	(2008$ millions)	8.7	8.5	8.5	8.5	8.5	8.5	8.5	7.4
Change in INPV	(2008$ millions)		(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(1.3)
	(%)		−1.93%	−1.78%	−1.96%	−1.96%	−1.96%	−1.96%	−14.84%
Product Conversion Costs.	(2008$ millions)		0.3	0.3	0.3	0.3	0.3	0.3	1.0
Capital Conversion Costs.	(2008$ millions)		0.2	0.2	0.2	0.2	0.2	0.2	3.6
Total Investment Required.	(2008$ millions)		0.5	0.5	0.5	0.5	0.5	0.5	4.6

TABLE V.21—MANUFACTURER IMPACT ANALYSIS FOR OIL-FIRED STORAGE WATER HEATERS—PRESERVATION OF OPERATING PROFIT MARKUP SCENARIO

	Units	Base case	Trial standard level						
			1	2	3	4	5	6	7
INPV	(2008$ millions)	8.7	8.3	8.4	8.3	8.3	8.3	8.3	5.2
Change in INPV	(2008$ millions)		(0.3)	(0.3)	(0.4)	(0.4)	(0.4)	(0.4)	(3.5)
	(%)		−3.89%	−3.58%	−4.31%	−4.31%	−4.31%	−4.31%	−39.86%
Product Conversion Costs.	(2008$ millions)		0.3	0.3	0.3	0.3	0.3	0.3	1.0
Capital Conversion Costs.	(2008$ millions)		0.2	0.2	0.2	0.2	0.2	0.2	3.6
Total Investment Required.	(2008$ millions)		0.5	0.5	0.5	0.5	0.5	0.5	4.6

TSL 1 represents an improvement in efficiency for oil-fired storage water heaters from the baseline level of 0.53 EF to 0.58 EF for the representative rated storage volume of 32 gallons. At TSL 1, DOE estimates the impacts on INPV to range from −$0.2 to −$0.3 million, or a change in INPV of −1.93 percent to −3.89 percent. At this level, the industry cash flow would be expected to decrease by approximately 28.5 percent, to $0.4 million, compared to the base-case value of $0.6 million in the year leading up to the standards. At TSL 1, one of the two major manufacturers would have to incur relatively small product and capital conversion costs to slightly modify their existing product line. DOE research suggests that this TSL can be met with changes to the insulation thickness of baseline products. However, if more costly design changes were required it could have more of an impact on the industry.

TSL 2 represents an improvement in efficiency from the baseline level of 0.53 EF to 0.60 EF for the representative rated storage volume of 32 gallons. At TSL 2, DOE estimates the impacts on INPV to range from −$0.2 million to −$0.3 million, or a change in INPV of −1.78 percent to −3.58 percent. At this level, the industry cash flow is estimated to decrease by approximately 28.5 percent, to $0.4 million, compared to the base-case value of $0.6 million in the year leading up to the standards. Similar to TSL 1, at TSL 2 DOE has tentatively concluded, based on a review of existing products on the market, that TSL 2 could be met with changes to the type and thickness of the insulation. The impacts at TSL 1 are slightly worse than at TSL 2 because the technology option for existing oil-fired storage water heaters on the market results in lower product costs at TSL 2. However, if TSL 2 is met with similar insulation changes, only one of two major manufacturers would still be required to slightly modify their current residential oil-fired storage product lines at TSL 2.

TSLs 3 through TSL 6 represent an improvement in efficiency from the baseline level of 0.53 EF to 0.62 EF for the representative rated storage volume of 32 gallons. At these levels, DOE estimates the impacts on INPV to range from −$0.2 million to −$0.4 million, or a change in INPV of −1.96 percent to −4.31 percent. At this level, the industry cash flow decreases by approximately 28.5 percent, to $0.4 million, compared to the base-case value of $0.6 million in the year leading up to the standards. At these TSLs, one major manufacturer would have to incur relatively minor product and capital conversion costs to modify their existing oil-fired residential storage water heater product line. DOE has tentatively concluded based on a review of existing products on the market that the efficiency requirements at TSL 3 through TSL 6 could be met with changes to the type and thickness of the insulation. Due to the low volume of oil-fired storage water heaters, if any manufacturer had to make substantial product or capital conversion costs to reach the amended energy conservation standard using a more complex technology, these substantial costs could force them to consider exiting the residential oil-fired storage water heater market.

TSL 7 (the max-tech level) represents an improvement in efficiency from the baseline level of 0.53 EF to 0.68 EF for the representative rated storage volume of 32 gallons. At TSL 7, DOE estimates the impacts on INPV to range from −$1.3 million to −$3.5 million, or a change in INPV of −14.84 percent to −39.86 percent. At this level, the industry cash flow is estimated to decrease by approximately 342.5 percent, to −$1.3 million, compared to the base-case value of $0.6 million in the year leading up to the standards. At TSL 7, at least one major manufacturer would have to incur very substantial product and capital conversion to redesign the combustion and baffling system to include a multi flue design. Given the small size of the residential oil-fired storage water heater market, this manufacturer stated that these extremely large substantial product and capital conversion costs would be difficult to justify. At TSL 7, it is possible that this manufacturer would exit the residential oil-fired storage water heater market. Because there are only two main manufacturers that supply the vast majority of U.S. shipments of oil-fired storage water heaters, any manufacturer exiting the market could lead to a market disruption.

iii. Cash-Flow Analysis Results for Gas-Fired Instantaneous Water Heaters

TABLE V.22—MANUFACTURER IMPACT ANALYSIS FOR GAS-FIRED INSTANTANEOUS WATER HEATERS—PRESERVATION OF RETURN ON INVESTED CAPITAL MARKUP SCENARIO

	Units	Base case	Trial standard level						
			1	2	3	4	5	6	7
INPV	(2008$ millions)	603.5	604.7	604.7	604.7	604.7	604.7	604.7	683.8
Change in INPV	(2008$ millions)		1.2	1.2	1.2	1.2	1.2	1.2	80.3

TABLE V.22—MANUFACTURER IMPACT ANALYSIS FOR GAS-FIRED INSTANTANEOUS WATER HEATERS—PRESERVATION OF RETURN ON INVESTED CAPITAL MARKUP SCENARIO—Continued

	Units	Base case	Trial standard level						
			1	2	3	4	5	6	7
	(%)		0.20%	0.20%	0.20%	0.20%	0.20%	0.20%	13.31%
Product Conversion Costs.	(2008$ millions)		0.0	0.0	0.0	0.0	0.0	0.0	8.0
Capital Conversion Costs.	(2008$ millions)		0.0	0.00	0.00	0.0	0.0	0.0	9.6
Total Investment Required.	(2008$ millions)		0.0	0.0	0.0	0.0	0.0	0.0	17.6

TABLE V.23—MANUFACTURER IMPACT ANALYSIS FOR GAS-FIRED INSTANTANEOUS STORAGE WATER HEATERS—PRESERVATION OF OPERATING PROFIT MARKUP SCENARIO

	Units	Base case	Trial standard level						
			1	2	3	4	5	6	7
INPV	(2008$ millions)	603.5	601.7	601.7	601.7	601.7	601.7	601.7	537.6
Change in INPV	(2008$ millions)		(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(65.9)
	(%)		−0.30%	−0.30%	−0.30%	−0.30%	−0.30%	−0.30%	−10.91%
Product Conversion Costs.	(2008$ millions)		0.0	0.0	0.0	0.0	0.0	0.0	8.0
Capital Conversion Costs.	(2008$ millions)		0.0	0.0	0.0	0.0	0.0	0.0	9.6
Total Investment Required.	(2008$ millions)		0.0	0.0	0.0	0.0	0.0	0.0	17.6

TSL 1 through TSL 6 represent an improvement in efficiency from the baseline gas-fired instantaneous water heater efficiency level of 0.62 EF to 0.82 EF for the representative input capacity of 199 kBtu/h. At TSL 1 through TSL 6, DOE estimates the INPV impacts to range from $1.2 million to −$1.8 million, or a change in INPV of 0.20 percent to −0.30 percent. At this level, the industry cash flow is estimated to remain at the base-case value of $75.0 million in the year leading up to the standards. DOE research suggests that over 80 percent of gas-fired instantaneous products sold today meet or exceed this efficiency, and nearly all manufacturers of gas-fired instantaneous water heaters currently make products that meet or exceed the efficiency required by TSL 1 through TSL 6. Hence, there appears to be little risk that TSL 1 through TSL 6 would greatly harm manufacturers or reduce the number of manufacturers that sell these products.

TSL 7 (the max-tech level) represents an improvement in efficiency from the baseline level of 0.62 EF to 0.95 EF for the representative input capacity of 199 kBtu/h. At TSL 7, DOE estimates the INPV impacts to range from $80.3 million to −$65.9 million, or a change in INPV of 13.31 percent to −10.91 percent. At this level, the industry cash flows are estimated to decrease by approximately 5.9 percent to $70.5 million, compared to the base-case value of $75.0 million in the year leading up to the standards. Only one manufacturer currently offers a gas-fired instantaneous water heater that meets the max-tech efficiency on the U.S. market. Most manufacturers would incur substantial product conversion and capital conversion costs to upgrade their existing products at TSL 7. To reach 0.95 EF, a more complex condensing model would need to be developed. Because only one manufacturer offers products that meet this efficiency, TSL 7 could greatly reduce the number of gas-fired instantaneous water heaters offered for sale in the United States.

b. Direct Heating Equipment Cash-Flow Analysis Results

Traditional DHE manufacturers are extremely concerned about the potential for amended energy conservation standards to harm their business. The vast majority of the traditional DHE market is controlled by three manufacturers. The small shipment volume of products in the traditional market has greatly reduced the number of competitors in the past decade. The traditional DHE market is mostly a replacement market met by these three companies that have acquired product lines as competitors were bought and absorbed or exited the market. Most DHE manufacturers offer a wide scope of products manufactured at low production rates to ensure that they can maintain a viable portion of the replacement market in order to remain in business. Because the traditional DHE market consists of a large number of relatively low-volume, mostly replacement models, manufacturers stated that they cannot justify large investments needed to redesign their existing product lines. Manufacturers are concerned that amended energy conservation standards could greatly impact the availability of replacement products for the majority of their customers due to the limited resources that would be available to update existing products and make changes to their existing facilities. In addition, manufacturers were concerned that energy conservation standards could lower profitability at higher TSLs because demand is expected to decline in response to increases in first cost that could cause consumers to switch to other types of heating appliances.

Gas hearth manufacturers were also concerned about potentially detrimental impacts from amended energy conservation standards. While there are three major gas hearth DHE manufacturers, DOE identified an additional 12 manufacturers in the market and technology assessment (see chapter 3 of the TSD). Because consumers generally are more interested in the appearance of these products than

efficiency, every manufacturer typically offers a wide range of product lines and an even greater number of individual products. Manufacturers are concerned that higher energy conservation standards could harm their business because they do not have the resources to upgrade all these existing product lines and could be forced to offer fewer products after the compliance date for the amended energy conservation standards. Manufacturers were also concerned that higher price points could lead to lower profitability. Because of the large number of manufacturers and the recent decline in shipments, manufacturers were concerned that additional production costs could not be passed on to consumers or that markups would be lowered to avoid higher price points leading to lower sales.

To assess the lower end of the range of potential impacts of amended standards on DHE manufacturers, DOE modeled the industry assuming the preservation of return on invested capital scenario. Besides the impact of shipments and the required capital and product conversion costs on INPV, this scenario assumes that manufacturers are able to maintain their base-case return, even on additional invested capital. In this scenario, operating profit increases after the compliance date of the amended energy conservation standards because manufacturers continue to earn a historical rate of return on the investments required by the amended energy conservation standards.

To assess the higher end of the range of potential impacts of amended standards on the DHE industry, DOE modeled the preservation of operating profit markup scenario. In this scenario, higher energy conservation standards result in lower manufacturer percentage markups. The preservation of operating profit markup scenario models manufacturers' concerns about the low volume of shipments and declining profitability if higher energy conservation standards were implemented. The preservation of operating profit scenario also models gas hearth manufacturer concerns that amended energy conservation standards would impact profitability due to the need to lower their markups to keep customers from switching to non-covered hearth products if the energy conservation standards significantly raised the installed prices of covered products. In the preservation of operating profit scenario, manufacturer markups decline and operating profit remains the same after the compliance date of the amended energy conservation standards as in the base case. Industry value is harmed because manufacturers do not earn additional return on the investments required by the amended standards.

i. Cash-Flow Analysis Results for Traditional Direct Heating Equipment (Gas Wall Fan, Gas Wall Gravity, Gas Floor, and Gas Room Direct Heating Equipment)

TABLE V.24—MANUFACTURER IMPACT ANALYSIS FOR TRADITIONAL DIRECT HEATING EQUIPMENT—PRESERVATION OF RETURN ON INVESTED CAPITAL MARKUP SCENARIO

	Units	Base case	Trial standard level					
			1	2	3	4	5	6
INPV	(2008$ millions)	17.9	17.5	17.3	16.9	16.7	16.2	15.7
Change in INPV	(2008$ millions)		(0.4)	(0.6)	(1.1)	(1.3)	(1.8)	(2.2)
	(%)		−2.27%	−3.42%	−5.91%	−7.16%	−9.99%	−12.28%
Product Conversion Costs.	(2008$ millions)		0.6	1.0	1.9	2.4	3.5	4.3
Capital Conversion Costs.	(2008$ millions)		1.2	2.4	4.5	5.6	4.7	6.8
Total Investment Required.	(2008$ millions)		1.84	3.40	6.39	7.98	8.14	11.03

TABLE V.25—MANUFACTURER IMPACT ANALYSIS FOR TRADITIONAL DIRECT HEATING EQUIPMENT—PRESERVATION OF OPERATING PROFIT MARKUP SCENARIO

	Units	Base case	Trial standard level					
			1	2	3	4	5	6
INPV	(2008$ millions)	17.9	16.3	14.9	11.9	10.4	9.9	7.2
Change in INPV	(2008$ millions)		(1.6)	(3.1)	(6.0)	(7.6)	(8.0)	(10.8)
	(%)		−9.11%	−17.20%	−33.54%	−42.14%	−44.84%	−59.98%
Product Conversion Costs.	(2008$ millions)		0.6	1.0	1.9	2.4	3.5	4.3
Capital Conversion Costs.	(2008$ millions)		1.2	2.4	4.5	5.6	4.7	6.8
Total Investment Required.	(2008$ millions)		1.84	3.40	6.39	7.98	8.14	11.03

For traditional DHE, TSL 1 represents an improvement in efficiency from the baseline level of 74-percent AFUE to 75-percent AFUE for gas wall fan DHE, an improvement in efficiency from the baseline level of 64-percent AFUE to 66-percent for gas wall gravity DHE, an improvement in efficiency from the baseline level of 57-percent AFUE to 58-percent AFUE for gas floor DHE (the max-tech level), and an improvement in efficiency from the baseline level of 64-percent AFUE to 66-percent AFUE for gas room DHE at their respective representative input rating ranges. DOE research suggests that manufacturers would use an intermittent ignition and a two-speed blower for gas wall fan DHE and an improved heat exchanger design for gas wall gravity, gas floor units, and gas room DHE to achieve the efficiencies required by TSL 1. At TSL 1, DOE estimates the impacts on INPV to range from $0.4 to −$1.6 million, or a change

in INPV of −2.27 percent to −9.11 percent. At this level, the industry cash flow is estimated to decrease by approximately 45.7 percent, to $0.8 million, compared to the base-case value of $1.4 million in the year leading up to the standards. While some manufacturers may need to make redesigns to some of their products even at TSL 1, manufacturers generally have a significant number of products that meet the required efficiencies for most traditional DHE product types, and for this reason, a complete exit from the market by any manufacturer is unlikely.

TSL 2 represents an improvement in efficiency from the baseline level of 74-percent AFUE to 76-percent for gas wall fan DHE, an improvement in efficiency from the baseline level of 64-percent AFUE to 68-percent AFUE for gas wall gravity DHE, an improvement in efficiency from the baseline level of 57-percent AFUE to 58-percent AFUE for gas floor DHE (the max-tech level), and an improvement in efficiency from the baseline level of 64-percent AFUE to 67-percent for gas room DHE at the representative input rating ranges for each product type. DOE research suggests that at TSL 2, manufacturers would opt to use an improved heat exchanger and intermittent ignition for gas wall fan DHE, and make further improvements to the heat exchanger for gas wall gravity and gas room DHE, and use the same improved heat exchanger for gas floor DHE as at TSL 1 to reach the efficiency levels required by TSL 2. At TSL 2, DOE estimates the impacts in INPV to range from −$0.6 million to −$3.1 million, or a change in INPV of −3.42 percent to −17.20 percent. At this level, the industry cash flow is estimated to decrease by approximately 86.1 percent, to $0.2 million, compared to the base-case value of $1.4 million in the year leading up to the standards. At TSL 2, every manufacturer would face higher product development costs in order to offer a similar range of product offerings. However, at TSL 2, it is likely that more products would be discontinued because more of the current products on the market fall below the required efficiencies. As a result, manufacturers must either expend resources to cover the necessary product conversion and capital conversion costs, or they will be forced to discontinue some of their existing product lines. While TSL 2 would have a significant impact on manufacturers, most manufacturers would not be expected to face a complete redesign for most traditional DHE product types. Even if manufacturers lowered the number of product lines offered in certain product classes, manufacturers would have enough existing products that meet or exceed the required efficiencies to upgrade most of their existing product lines and maintain viable production volumes after the compliance date of the amended energy conservation standards.

TSL 3 represents an improvement in efficiency from the baseline level of 74-percent AFUE to 77-percent for gas wall fan DHE, an improvement in efficiency from the baseline level of 64-percent AFUE to 71-percent AFUE for gas wall gravity units, an improvement in efficiency from the baseline level of 57-percent AFUE to 58-percent AFUE for gas floor DHE (the max-tech level), and an improvement in efficiency from the baseline level of 64-percent AFUE to 68-percent for gas room DHE at the representative input rating ranges. DOE research suggests that manufacturers would improve baseline units by adding an intermittent ignition, a two-speed blower, and an improved heat exchanger for gas wall fan units, make further improvements to the heat exchanger used to reach TSL 2 for gas wall gravity and gas room units, and use the same improved heat exchanger for gas floor DHE as at TSL 1 and TSL 2 to reach the efficiency levels of TSL 3. At TSL 3, DOE estimates the INPV impacts to range from −$1.1 million to −$6.0 million, or a change in INPV of −5.91 percent to −33.54 percent. At this level, the industry cash flow is estimated to decrease by approximately 161.8 percent to −$0.9 million, compared to the base-case value of 1.4 million in the year leading up to the standards. The large estimated impact on INPV suggests that manufacturers would be substantially harmed if profitability were impacted.

At TSL 3, products increasingly rely on purchased parts, making it more likely that manufacturers' profitability would decline. At TSL 3, it is likely that some manufacturers would reduce the number of product lines offered in order to lower the product conversion and capital conversion costs required at TSL 3. Discontinuing product lines would still have a negative impact on the manufacturers that selectively upgrade existing product lines since many manufacturers rely on aggregated production scale from all products they sell to secure favorable purchased part and raw material prices. The fixed portion of product conversion costs, such as certification and the total capital conversion costs, typically require a minimum shipment volume in order to be economically justifiable to the manufacturer. However, at TSL 3, most manufacturers have existing products that meet the required efficiencies in three out of the four product types of traditional DHE. Because manufacturers have a substantial number of product lines that meet the required efficiencies at TSL3, even if manufacturers selectively upgrade their existing product lines, they would be expected to maintain a viable production volume after the compliance date of the amended energy conservation and not exit the market completely.

TSL 4 is the max-tech level for gas wall fan DHE. TSL 4 represents an improvement in efficiency from the baseline level of 74-percent AFUE to 80-percent for gas wall fan DHE at the representative input rating range. The efficiency requirements for gas wall gravity, gas floor, and gas room DHE are the same at TSL 4 as at TSL 3. To achieve the max-tech level for gas wall fan DHE, DOE research suggests that manufacturers would need to use an electronic ignition and induced draft. DOE anticipates that manufacturers would make the same improvements to the heat exchangers as necessary to achieve TSL 3 for gas wall gravity, gas floor, and gas-room DHE. At TSL 4, DOE estimates the INPV impacts to range from −$1.3 million to −$7.6 million, or a change in INPV of −7.16 percent to −42.14 percent. At this level, the industry cash flow is estimated to decrease by approximately 202.3 percent to −$1.4 million, compared to the base-case value of $1.4 million in the year leading up to the standards.

Most manufacturers' products are below the max-tech level for gas wall fan DHE, which further increases the total capital and product conversion costs over TSL 3. At TSL 4, most manufacturers would have to completely redesign their gas wall fan products and purchase new tooling. The discrepancy between the number of unit shipments and the number of product lines requiring significant product development to meet the potential energy conservation standards is a large driver of the negative impacts at TSL 4. When faced with these substantial costs, most manufacturers would likely discontinue products in this product class or possibly exit the market altogether. In addition, at TSL 4 every manufacturer would face significant conversion costs in every product type, making it much more likely that the industry would offer far fewer products and that the industry would have fewer competitors after the compliance date of amended standards. Besides the likelihood of multiple manufacturers discontinuing product lines or exiting the market, the large impact on INPV shows that manufacturers would also be

substantially harmed if profitability were impacted for existing or redesigned products.

TSL 5 represents an improvement in efficiency from the baseline level of 74-percent AFUE to 75-percent AFUE for gas wall fan DHE, an improvement in efficiency from the baseline level of 64-percent AFUE to 72-percent AFUE for gas wall gravity units (the max-tech level), an improvement in efficiency from the baseline level of 57-percent AFUE to 58-percent AFUE for gas floor DHE (the max-tech level), and an improvement in efficiency from the baseline level of 64-percent AFUE to 83-percent AFUE (the max-tech level) for gas room DHE at the representative input rating ranges for each product type. To achieve the efficiencies required by TSL 5, DOE research suggests that manufacturers would need to use an intermittent ignition and a two-speed blower for gas wall fan DHE, use an electronic ignition for gas wall gravity DHE, use an improved heat exchanger for gas floor DHE, and use electronic ignition and a multiple heat exchanger design for gas room DHE. At TSL 5, DOE estimates the impacts on INPV to range from −$1.8 million to −$8.0 million, or a change in INPV of −9.99 percent to −44.84 percent. At this level, the industry cash flow is estimated to decrease by approximately 195.5 percent, to −$1.3 million, compared to the base-case value of $1.4 million in the year leading up to the standards.

Most traditional DHE models available on the market today are below the max-tech level for gas wall gravity and gas room DHE, which leads to higher total capital and product conversion costs and more negative impacts on INPV at TSL 5 than TSL 4. DOE research suggests that at TSL 5, most manufacturers would have to completely redesign and buy new tooling in order to offer gas wall gravity and gas room products at these efficiency levels. The small number of unit shipments and the large number of product lines that would require significant product development to meet the energy conservation standards is a large driver of the negative impacts at TSL 5. Hence, the potential number of product lines being discontinued and the number of manufacturers exiting the market at TSL 5 would be expected to be greater than at TSL 4, with even greater repercussions on consumer choice, employment, and competition.

TSL 6 is set at the max-tech level for all traditional DHE product classes. The efficiency requirements for gas wall gravity, gas floor, and gas room DHE are the same at TSL 6 as at TSL 5. However, TSL 6 also represents an improvement from 75-percent to 80-percent AFUE for gas wall fan DHE (the max-tech level). To achieve the max-tech level for gas wall fan DHE, DOE research suggests that manufacturers would need to use an electronic ignition and induced draft. As to the other products, DOE anticipates that manufacturers would need to use an electronic ignition for gas wall gravity DHE, use an improved heat exchanger for gas floor DHE, and use electronic ignition and a multiple heat exchanger design for gas room DHE. At the max-tech TSL (TSL 6), DOE estimates the INPV impacts to range from −$2.2 million to −$10.8 million, or a change in INPV of −12.28 percent to −59.98. At this level, the industry cash flow is estimated to decrease by approximately 269.5 percent to −$2.4 million, compared to the base-case value of $1.4 million in the year leading up to the standards. Most products currently available are below the max-tech level for all product classes. At the max-tech level, most manufacturers would be faced with complete product redesigns for almost all product lines and significant plant changes to remain in the market. Most manufacturers would be expected to discontinue products or exit the market altogether. Due to the low volume of shipments in the industry, it unlikely that any manufacturer could offer close to the range of products currently offered today. Hence, some product classes may cease to be commercially available. It is very likely that multiple manufacturers would exit the market at the max-tech level for every product class.

ii. Cash-Flow Analysis Results for Gas Hearth Direct Heating Equipment

TABLE V.26—MANUFACTURER IMPACT ANALYSIS FOR GAS HEARTH DIRECT HEATING EQUIPMENT—PRESERVATION OF RETURN ON INVESTED CAPITAL MARKUP SCENARIO

	Units	Base case	Trial standard level					
			1	2	3	4	5	6
INPV	(2008$ millions)	86.4	85.5	85.5	85.5	88.8	88.8	96.6
Change in INPV	(2008$ millions)		(0.9)	(0.9)	(0.9)	2.4	2.4	10.2
	(%)		−1.07%	−1.07%	−1.07%	2.80%	2.80%	11.82%
Product Conversion Costs.	(2008$ millions)		0.53	0.53	0.53	1.40	1.40	8.07
Capital Conversion Costs.	(2008$ millions)		0.20	0.20	0.20	0.53	0.53	4.03
Total Investment Required.	(2008$ millions)		0.73	0.73	0.73	1.93	1.93	12.09

TABLE V.27—MANUFACTURER IMPACT ANALYSIS FOR GAS HEARTH DIRECT HEATING EQUIPMENT—PRESERVATION OF OPERATING PROFIT MARKUP SCENARIO

	Units	Base case	Trial standard level					
			1	2	3	4	5	6
INPV	(2008$ millions)	86.4	86.2	86.2	86.2	71.6	71.6	31.2
Change in INPV	(2008$ millions)		(0.2)	(0.2)	(0.2)	(14.8)	(14.8)	(55.1)
	(%)		−0.22%	−0.22%	−0.22%	−17.13%	−17.13%	−63.83%
Product Conversion Costs.	(2008$ millions)		0.53	0.53	0.53	1.40	1.40	8.07
Capital Conversion Costs.	(2008$ millions)		0.20	0.20	0.20	0.53	0.53	4.03

TABLE V.27—MANUFACTURER IMPACT ANALYSIS FOR GAS HEARTH DIRECT HEATING EQUIPMENT—PRESERVATION OF OPERATING PROFIT MARKUP SCENARIO—Continued

	Units	Base case	Trial standard level					
			1	2	3	4	5	6
Total Investment Required.	(2008$ millions)	.....	0.73	0.73	0.73	1.93	1.93	12.09

TSL 1 through TSL 3 represents an improvement in efficiency from the baseline level of 64-percent AFUE to 67-percent AFUE for gas hearth DHE at the 27,000 Btu/h to 46,000 Btu/h representative input rating range. To reach 67-percent AFUE from baseline efficiency, manufacturers would likely use an electronic ignition. At TSL 1 through TSL 3, DOE estimates the impacts on INPV to range from −$0.2 million to −$0.9 million, or a change in INPV of −0.22 percent to −1.07 percent. At this level, the industry cash flow is estimated to decrease by approximately 7.6 percent, to $2.6 million, compared to the base-case value of $2.8 million in the year leading up to the standards. Most manufacturers offer multiple products that meet this efficiency level. Because there are so many product lines at the baseline efficiency, however, there could be fairly substantial product conversion costs at this TSL because manufacturers would have to slightly redesign all of the baseline products. In addition, some manufacturers could be required to make other minor changes to their production lines to accommodate other improvements such as additional baffling. DOE research suggests that such changes may be inexpensive since they would not require the industry to replace major hard tooling at TSL 1 through TSL 3. Because of the small change in product costs at TSL 1 through TSL 3, it is unlikely that manufacturer profitability would decrease appreciably to maintain the existing shipments.

TSL 4 and TSL 5 represent an improvement in efficiency from the baseline level of 64-percent AFUE to 72-percent AFUE for gas hearth DHE at the 27,000 Btu/h to 46,000 Btu/h representative input rating range. DOE research suggests that fan-assisted gas hearth DHE products could reach 72-percent AFUE from baseline efficiency. At TSL 4 and TSL 5, DOE estimates the impacts on INPV to range from $2.4 million to −$14.8 million, or a change in INPV of 2.80 percent to −17.13 percent. At this level, the industry cash flow is estimated to decrease by approximately 19.9 percent, to $2.3 million, compared to the base-case value of $2.8 million in the year leading up to the standards. At TSL 4 and TSL 5, gas hearth manufacturers would likely reduce the scope of their product offerings to lower the required conversion costs to comply with the energy conservation standard. Many of the smaller manufacturers could consider existing the market when faced with fairly substantial product and capital conversion costs that are not justified by their shipment volumes. Much of the capital conversion costs are expected to involve changes to handle new materials like additional insulation and baffling, changes to the heat shields, and new stamping dies for many manufacturers that need to greatly alter their existing designs. Manufacturers will also incur additional product conversion costs for product development and certification because most products currently sold would not meet the efficiency requirements of TSL 4 and TSL 5. While most of the changes above the baseline require manufacturers to purchase or manufacture more costly components that increase MPC, the resulting higher MSPs also concerned manufacturers. Manufacturers stated that the market is very price sensitive, so any increase in unit price could invariably lead to fewer sales. Hence, manufacturers expect that the industry would have to lower its profit margins in order to reduce shipments impacts that could result from cost increases related to potential energy efficiency improvements.

TSL 6 represents an improvement in efficiency from the baseline level of 64-percent AFUE to 93-percent AFUE for gas hearth DHE at the 27,000 Btu/h to 46,000 Btu/h representative input rating range. To reach 93-percent AFUE from the baseline efficiency, manufacturers would need to use a condensing design. At the max-tech TSL (TSL 6), DOE estimates the impacts on INPV to range from $10.2 million to −$55.1 million, or a change in INPV of 11.82 percent to −63.83 percent. At this level, the industry cash flow is estimated to decrease by approximately 128.8 percent, to −$0.8 million, compared to the base-case value of $2.8 million in the year leading up to the standards.

At TSL 6, manufacturers indicated they would greatly reduce the scope of their product offerings to lower the required costs to comply with an amended energy conservation standard at this level. Because there are very few products on the market today that use this technology, the product development costs greatly increase at this TSL. DOE research suggests that manufacturers would likely need a secondary heat exchanger at the max-tech level, which could alter the size and structure of most existing product lines. Manufacturers expressed concern regarding their ability to use existing tooling and equipment, much of which may become obsolete when hearths have to be redesigned from the ground up to accommodate the efficiency requirements at this level. It is also very likely that many of the 10 small business manufacturers could be forced to exit the market when faced with these substantial conversion costs since they do not have the access to capital, the product development resources, or the shipment volumes to justify these conversion costs.

Manufacturers also stated that they were concerned about consumer utility issues at TSL 6. Smaller units would likely be significantly impacted at this TSL because the low inherent interior volume makes it much more difficult to accommodate a secondary heat exchanger without narrowing the area available for the logs and flame. Manufacturers also indicated that it gets progressively more difficult to imitate a natural, wood-burning flame appearance at this efficiency level, which could hurt sales and reduce consumer utility. Finally, manufacturers were concerned that the MPCs at the max-tech level are estimated to be more than double the baseline costs for the representative input rating range. In order to maintain shipments of gas hearth DHE with substantially higher costs and potential consumer utility impacts, manufacturers believe that profitability would be greatly impacted.

c. Pool Heaters Cash-Flow Analysis Results

Pool heater manufacturers expressed concern that amended energy

conservation standards could cause significant harm to their industry, because pool heaters are a luxury item and have low annual usage that would prevent the majority of consumers from recouping the greater initial price at higher efficiencies. Since pool heaters are considered a luxury product, manufacturers expect sales to decline as unit costs increase. As the required efficiencies approach a condensing technology, manufacturers would have to make more substantial changes to their existing products that add significant costs that would encourage repair instead of replacement of failed units, cause fuel switching (*e.g.*, to heat pumps or solar systems), or make customers abandon heating their pool altogether.

To assess the lower end of the range of potential impacts on pool heater manufacturers, DOE modeled the preservation of return on invested capital markup scenario. Besides the impact of changes in shipments on INPV and the required capital and product conversion costs, this case represents the lower end of the potential impacts on manufacturers because it assumes that manufacturers would earn a similar return on the investments required by amended energy conservation standards. To assess the higher end of the range of potential impacts on pool heater manufacturers, DOE modeled the preservation of operating profit markup scenario (*i.e.*, constant absolute profit, regardless of cost increases, which leads to declining profit margins at higher costs). This scenario models manufacturers concerns that margins would be harmed at higher price points because they expect to lower their profit margins to minimize impacts due to lower sales.

TABLE V.28—MANUFACTURER IMPACT ANALYSIS FOR GAS-FIRED POOL HEATERS—PRESERVATION OF RETURN ON INVESTED CAPITAL MARKUP SCENARIO

	Units	Base case	Trial standard level					
			1	2	3	4	5	6
INPV	(2008$ millions)	61.4	61.4	61.8	61.1	61.9	64.5	74.2
Change in INPV	(2008$ millions)		0.1	0.4	(0.2)	0.5	3.1	12.9
	(%)		0.13%	0.66%	−0.39%	0.88%	5.03%	20.96%
Product Conversion Costs.	(2008$ millions)		0.0	0.0	2.6	2.6	4.6	5.5
Capital Conversion Costs.	(2008$ millions)		0.0	0.3	1.2	1.4	4.4	7.1
Total Investment Required.	(2008$ millions)		0.0	0.3	3.8	4.0	9.0	12.6

TABLE V.29—MANUFACTURER IMPACT ANALYSIS FOR GAS-FIRED POOL HEATERS—PRESERVATION OF OPERATING PROFIT MARKUP SCENARIO

	Units	Base case	Trial standard level					
			1	2	3	4	5	6
INPV	(2008$ millions)	61.4	61.2	60.3	55.8	53.9	41.8	16.8
Change in INPV	(2008$ millions)		(0.2)	(1.0)	(5.6)	(7.5)	(19.5)	(44.5)
	(%)		−0.29%	−1.66%	−9.06%	−12.15%	−31.82%	−72.59%
Product Conversion Costs.	(2008$ millions)		0.0	0.0	2.6	2.6	4.6	5.5
Capital Conversion Costs.	(2008$ millions)		0.0	0.3	1.2	1.4	4.4	7.1
Total Investment Required.	(2008$ millions)		0.0	0.3	3.8	4.0	9.0	12.6

TSL 1 represents an improvement in efficiency from the baseline level of 78-percent thermal efficiency to 81-percent thermal efficiency for the representative input rating of 250,000 Btu/h. At TSL 1, DOE estimates the INPV impacts to range from $0.1 million to −$0.2 million, or a change in INPV of 0.13 percent to −0.29 percent. At this level, the industry cash flow would not be expected to change from the base-case value of $2.7 million in the year leading up to the standards. Over 60 percent of current gas-fired pool heaters meet or exceed the efficiency requirements at TSL 1. DOE research suggests that changes to the heat exchanger would allow baseline products to meet TSL 1. These changes would not require major modifications to existing units, resulting in minimal impacts to manufacturers at TSL 1.

TSL 2 represents an improvement in efficiency from the baseline level of 78-percent thermal efficiency to 82-percent thermal efficiency for the representative input rating of 250,000 Btu/h. At TSL 2, DOE estimates the INPV impacts to range from $0.4 to −$1.0 million, or a change in INPV of 0.66 percent to −1.66 percent. At this level, the industry cash flow is expected to decrease by approximately 3.9 percent to $2.6 million, compared to the base-case value of $2.7 million in the year leading up to the standards. Almost half of the pool heaters currently are sold at or above this efficiency level, and nearly all manufacturers make products that can achieve the efficiency required at TSL 2. DOE research suggests that minor improvements to heat exchangers and insulation surrounding the combustion chamber would need to be made to convert lower-efficiency units to this efficiency, causing manufacturers to incur small capital conversion costs. However, because the basic designs of atmospheric pool heaters that comprise the majority of current shipments remain relatively unchanged at TSL 2, there are minimal impacts on manufacturers.

TSL 3 represents an improvement in efficiency from the baseline level of 78-percent thermal efficiency to 83-percent thermal efficiency for the representative input rating of 250,000 Btu/h. At TSL 3, DOE estimates the INPV impacts to range from −$0.2 to −$5.6 million, or a change in INPV of −0.39 percent to −9.06 percent. At this level, the industry cash flow is estimated to decrease by approximately 43.0 percent to $1.6 million, compared to the base-case value of $2.7 million in the year leading up to the standards. DOE research suggests that most manufacturers would have to improve some of their product lines to reach an 83-percent thermal efficiency by using power venting technology. DOE research also suggests that while the manufacturing production costs are not expected to increase significantly, most manufacturers would incur some product and capital conversion costs to increase their production of existing lower volume products at TSL 3. TSL 3 would eliminate most common atmospheric models on the market today, which could hurt profitability if consumer demand for gas-fired pool heaters holds at its current level despite the higher production costs at this TSL.

TSL 4 represents an improvement in efficiency from the baseline level of 78-percent thermal efficiency to 84-percent thermal efficiency for the representative input rating of 250,000 Btu/h. At TSL 4, DOE estimates the INPV impacts to range from $0.5 million to −$7.5 million, or a change in INPV of 0.88 percent to −12.15 percent. At this level, the industry cash flow is estimated to decrease by approximately 45.9 percent to $1.5 million, compared to the base-case value of $2.7 million in the year leading up to the standards. Similar to TSL 3, TSL 4 would require fairly substantial capital and product conversion costs. Because this efficiency level eliminates all atmospheric models that are currently on the market and requires additional improvements over TSL 3, the capital conversion costs are even higher at TSL 4. DOE research suggests that manufacturers would have to design products that use power venting and an improved heat exchanger, which could be costly to develop. Manufacturers stated that the high component costs at TSL 4 would result in substantially higher costs for consumers. The higher production costs and conversion costs make it more likely that manufacturers' concerns about reduced profitability would be realized at TSL 4.

TSL 5 represents an improvement in efficiency from the baseline level of 78-percent thermal efficiency to 86-percent thermal efficiency for the representative input rating of 250,000 Btu/h. At TSL 5, DOE estimates the INPV impacts to range from $3.1 million to −$19.5 million, or a change in INPV of 5.03 percent to −31.82 percent. At this level, the industry cash flow is estimated to decrease by approximately 108.9 percent to −$0.2 million, compared to the base-case value of $2.7 million in the year leading up to the standards. Over 90 percent of current shipments are below this efficiency level. Manufacturers would incur significant conversion costs at TSL 5 and would likely significantly reduce the scope of their product offerings. DOE research suggests that manufacturers would switch remaining units to sealed combustion systems and improved heat exchanger designs, adding substantial production cost and eliminating unpowered units from the market. Manufacturers believe that consumers would look for alternatives to gas-fired pool heaters or not replace failed units due to the higher product costs that would result from an amended energy conservation standard at TSL 5. Manufacturers also indicated that problems at efficiencies they consider near-condensing could force some companies to only offer fully condensing units with even greater negative paybacks for consumers. A further concern of manufacturers relates to the current installer and maintenance base for pool heaters, which would require significant additional training to be able to properly install, troubleshoot, and service increasingly complex pool heaters.

TSL 6 (max-tech level) represents an improvement in efficiency from the baseline level of 78-percent thermal efficiency to 95-percent thermal efficiency for the representative input rating of 250,000 Btu/h. At TSL 6, DOE estimates the INPV impacts to range from $12.9 million to −$44.5 million, or a change in INPV of 20.96 percent to −72.59 percent. At this level, the industry cash flow is estimated to decrease by approximately 157.2 percent to −$1.6 million, compared to the base-case value of $2.7 million in the year leading up to the standards. Almost all gas-fired pool heaters currently on the market are well below this efficiency level. Manufacturers would face significant conversion costs at TSL 6 in order to develop condensing systems or refine existing designs to achieve lower cost condensing pool heaters. DOE research suggests that heat exchanger materials would need to withstand acidic condensate created by condensing pool heaters. In light of strong concerns about consumer reaction to a substantially-increased first cost at TSL 6, manufacturers do not believe this efficiency level could be justified for residential pool heater consumers due to low usage and significantly higher costs. Manufacturers believe that consumers would not be willing to purchase such an expensive product and would either find an alternative to gas-fired pool heaters or no longer purchase a gas-fired pool heater. In addition, at TSL 6 manufacturers are also concerned about the industry's ability to educate and retrain installers and servicers of pool heaters in time for the compliance date of the standard. Condensing units with sealed combustion are more complex than the vast majority of atmospheric units on the market today and would require significant additional training for safe installation and maintenance. Manufacturers also expect product support costs to increase significantly as complexity increases the likelihood and frequency of events such as component failures and unit lockouts that would require manufacturer support and servicing, as well as increased warranty costs. Besides increasing warranty costs for manufacturers, the issues and costs associated with proper unit maintenance post-warranty could potentially cause them to switch fuel sources (*e.g.,* switching to heat pump or solar water heaters) or abandon pool heating altogether.

d. Impacts on Employment

DOE quantitatively assessed the impacts of potential amended energy conservation standards on employment for each of the three types of heating products that are the subject of this rulemaking. DOE used the GRIM to estimate the domestic labor expenditures and number of domestic production workers in the base case and at each TSL from 2008 to 2045 for the residential water heater industry and from 2008 to 2043 for the DHE and pool heater industries. DOE used statistical data from the U.S. Census Bureau, the results of the engineering analysis, and interviews with manufacturers to determine the inputs necessary to calculate industry-wide labor expenditures and domestic employment levels. Labor expenditures are a function of the labor intensity of the equipment, the sales volume, and an assumption that wages remain fixed in real terms over time.

In each GRIM, DOE used the labor content of each product and the manufacturing production costs from the engineering analysis to estimate the annual labor expenditures in the

residential water heater, DHE, and pool heater industries. DOE used Census data and interviews with manufacturers to estimate the portion of the total labor expenditures that is for U.S. (*i.e.,* domestic) labor.

The estimates of production workers in this section only cover workers up to the line-supervisor level that are directly involved in fabricating and assembling a product within the Original Equipment Manufacturer (OEM) facility. Workers that perform services that are closely associated with production operations, such as material handing with a forklift, are also included as production labor. DOE's estimates only account for production workers that manufacture the specific products covered by this rulemaking. For example, a worker on a commercial water heater line would not be included with the estimate of the number of residential water heater production workers.

The employment impacts shown in Table V.30 through Table V.34 represent the potential production employment that could result following amended energy conservation standards. The upper end of the results in these tables estimates the maximum potential increase in production workers after amended energy conservation standards. The upper end of the results assumes manufacturers would continue to produce the same scope of covered products in the same production facilities. The upper end of the range also assumes that domestic production is not shifted to lower-labor-cost countries. Because there is a real risk of manufacturers exiting the market or no longer offering the same scope of covered products in response to amended energy conservation standards, the lower end of the range of employment results in Table V.30 through Table V.34 include the estimate of the total number of U.S. production workers in the industry that could lose their job if all existing production were to no longer be made domestically. While the results present a range of employment impacts following the compliance date of amended energy conservation standards, the discussion below also includes a qualitative discussion of the likelihood of negative employment impacts at the various TSLs. Finally, the employment impacts shown are independent of the employment impacts from the broader U.S. economy, which are documented in chapter 15, Employment Impact Analysis, of the NOPR TSD.

i. Gas-Fired and Electric Storage Water Heater Employment Impacts

Using the GRIM, DOE estimates that would be 3,690 domestic gas-fired and electric storage water heater production workers in 2015 without amended energy conservation standards. Using Census Bureau data and interviews with manufacturers, DOE estimates that approximately two-thirds of gas-fired and electric storage water heaters sold in the United States are manufactured domestically. Table V.30 shows the range of the impacts of potential amended energy conservation standards on U.S. production workers in the gas-fired and electric storage water heater market.

TABLE V.30.—POTENTIAL CHANGES IN THE TOTAL NUMBER OF DOMESTIC GAS-FIRED AND ELECTRIC STORAGE WATER HEATER PRODUCTION WORKERS IN 2015

	Baseline	1	2	3	4	5	6	7
Total Number of Domestic Production Workers in 2015 (without changes in production locations) ..	3,690	3,758	3,842	3,881	3,977	4,396	7.768	9,823
Potential Changes in Domestic Production Workers in 2015 *	.....	(3,690) – 68	(3,690) – 152	(3,690) – 191	(3,690) – 287	(3,690) – 706	(3,690) – 4,078	(3,690) – 6,133

* DOE presents a range of potential employment impacts. Numbers in parentheses indicate negative numbers.

During manufacturer interviews, gas-fired and electric storage water heater manufacturers stated that they expect employment levels to remain relatively constant at TSL 1 through TSL 4. At these TSLs, baseline gas-fired and electric storage water heaters would be improved by increasing the insulation thickness around the tank. These improvements would not greatly alter the manufacturing process and are not likely to significantly change employment levels.

At TSL 5, domestic employment would be likely to increase if manufacturers built their dedicate heat pump line for large rated storage volumes in the United States. However, because the labor content to assemble fully integrated heat pump water heaters is much higher than most models currently on the market, manufacturers could also decide to build these lines in existing overseas production facilities. At TSL 5, the sourcing decisions would also impact the likely employment impacts. If manufacturers built a dedicated condensing line for large rated storage volumes in the United States, domestic employment could increase.

TSL 6 and TSL 7 could also impact domestic gas-fired and electric storage water heater employment. These TSLs effectively would require the use of integrated heat pump water heater technology for electric storage water heaters for all rate volumes. Manufacturers stated that at these levels, they initially would expect to purchase fully-assembled heat pump modules from off-shore suppliers because they do not have the manufacturing experience or the space in their existing facilities to accommodate assembling the heat hump modules. Once purchased, manufacturers would attach the modules to water heaters on lines modified to accommodate the very different assembly and testing

requirements of heat pump water heaters. While the industry typically has manufacturing facilities with a mix of dedicated and non-dedicated assembly lines by fuel type, flexible assembly lines may have to be discontinued at TSL 6, because heat pump water heaters are top-heavy, take longer to test, and take significantly longer to assemble than electric storage water heaters that use resistance-heater elements. Present facilities would likely need line extensions to accommodate the additional labor required for assembling heat pump water heaters. Therefore, if manufacturers source the heat pump modules and continue to assemble electric storage water heaters in their existing facilities, it is likely that employment would increase. However, the expected increase in the labor required to manufacture heat pump water heaters may also accelerate the trend of water heater manufacturers locating new production facilities outside the United States, especially if a manufacturer decides to assemble heat pump modules in-house. Because TSL 7 requires additional improvements over TSL 6, the potential positive impacts on employment at TSL 7 are greater if manufacturers do not relocate because the additional improvements also require more labor.

At TSL 7 (the max-tech level) gas-fired storage water heaters would have to operate in a fully-condensing mode. DOE research suggests that condensing gas-fired water heaters would be more complex than standard power-vent products and less efficient products and therefore would require additional labor to assemble. If manufacturers did not change their sourcing decisions at TSL 7, it is likely there would be positive employment impacts for gas-fired storage water heaters.

ii. Oil-Fired Storage Water Heater Employment Impacts

Using the GRIM, DOE estimates there would be 38 oil-fired storage water heater production workers in the U.S. in 2015 in the absence of amended energy conservation standards. Using the Census data and interviews with manufacturers, DOE estimates that approximately 95 percent of oil-fired water heaters sold in the United States are manufactured domestically. Table V.31 shows the impacts of amended energy conservation standards on U.S. production workers in the oil-fired water heater market.

TABLE V.31—POTENTIAL CHANGES IN THE TOTAL NUMBER OF DOMESTIC OIL-FIRED STORAGE WATER HEATER PRODUCTION WORKERS IN 2015

	Trial standard level							
	Baseline	1	2	3	4	5	6	7
Total Number of Domestic Production Workers in 2015 (without changes in production locations)	38	37	40	37	37	37	37	47
Potential Changes in Domestic Production Workers in 2015 *	.....	(38) – (1)	(38) – 2	(38) – (1)	(38) – (1)	(38) – (1)	(38) – (1)	(38) – 9

*DOE presents a range of potential employment impacts. Numbers in parentheses indicate negative numbers.

At TSL 1 through TSL 6, DOE does not expect substantial changes to domestic employment in the oil-fired storage water heater market if manufacturers are able to use the insulation type and thickness technology options in the engineering analysis to reach the efficiency requirements at these TSLs. At TSL 7, DOE research suggests that if all current suppliers continue to compete, domestic employment would likely increase slightly, because the non-proprietary, higher-efficiency heat exchangers required to reach this TSL would also require more labor to assemble. However, given the size of the oil-fired storage water heater market and the expected product conversion costs, companies that do not currently make oil-fired storage water heaters at these efficiency levels could exit the market. If the remaining manufacturers do not need to increase employment levels to meet the total market demand, employment in the residential oil-fired market could decline.

iii. Gas-Fired Instantaneous Water Heater Employment Impacts

DOE's research suggests that currently no gas-fired instantaneous water heaters are made domestically. All manufacturers or their domestic distributors do maintain offices in the United States to handle technical support, training, certification, and other requirements. However, as amended energy conservation standards for instantaneous water heaters are raised, the additional complexity of standards-compliant water heaters may require additional training and field support, thereby resulting in higher employment levels. Thus domestic employment may increase marginally due to amended energy conservation standards.

iv. Traditional Direct Heating Equipment Employment Impacts

Using the GRIM, DOE estimates there would be 300 traditional DHE production workers in the U.S. in 2013 in the absence of amended energy conservation standards. Using the Census Bureau data and interviews with manufacturers, DOE estimates that approximately 100 percent of the traditional DHE sold in the United States is manufactured domestically. Table V.32 shows the impacts of amended energy conservation standards on U.S. production workers in the traditional DHE market.

TABLE V.32—POTENTIAL CHANGES IN THE TOTAL NUMBER OF DOMESTIC TRADITIONAL DIRECT HEATING PRODUCTION WORKERS IN 2013

	Trial standard level						
	Baseline	1	2	3	4	5	6
Total Number of Domestic Production Workers in 2013 (without changes in production locations)	300	305	330	344	350	348	361

TABLE V.32—POTENTIAL CHANGES IN THE TOTAL NUMBER OF DOMESTIC TRADITIONAL DIRECT HEATING PRODUCTION WORKERS IN 2013—Continued

	Trial standard level						
	Baseline	1	2	3	4	5	6
Potential Changes in Domestic Production Workers in 2013*	.....	(300) – 5	(300) – 30	(300) – 44	(300) – 50	(300) – 48	(300) – 61

*DOE presents a range of potential employment impacts. Numbers in parentheses indicate negative numbers.

There could be negative employment impacts for DHE at any of the considered TSLs if manufacturers' expectations are realized regarding higher prices yielding reduced demand. Besides increasing component costs, more stringent TSLs put additional pressure on manufacturers that could require them to invest in low-volume products, discontinue product lines that do not meet the required efficiency level, or exit the market altogether.

While multiple manufacturers could be adversely affected by amended energy conservation standards, at TSL 1 and TSL2, most businesses have existing products in at least three of the four traditional DHE product types. If manufacturers chose to expand production of those products that meet the required efficiencies, employment could increase. However, multiple small businesses would be adversely affected at any TSL and could decide to discontinue some product lines rather than invest in product lines with very low volumes. Any manufacturer that decided to discontinue product lines could reduce total employment within the industry if it impacted the availability of substitute replacement products. Net employment impacts if manufacturers discontinued product lines at TSL 1 and TSL 2 would depend on total product demand and the source of replacement production labor. At TSL 3 and above, products become increasingly more complex, require higher capital and product conversion costs, and, hence, are likely to lead to the discontinuation of more product lines. Additionally, every manufacturer would face product conversion costs that required a complete redesign for at least one product class at TSL 3 and above. An amended energy conservation standard at TSL 3 and above could cause small businesses to exit the market completely or stop producing certain product classes. If small and large manufacturers discontinued product lines or exited the market, domestic employment would be impacted if replacements were not available or a manufacturer exited the market and its market share was not captured by another manufacturer.

v. Gas Hearth Direct Heating Equipment Employment Impacts

Using the GRIM, DOE estimates there would be 1,243 gas hearth DHE production workers in the U.S. in 2013 in the absence of amended energy conservation standards. Based upon interviews with manufacturers, DOE estimates that approximately 80 percent of gas hearth DHE sold in the United States is manufactured domestically. Table V.33 shows the impacts of potential amended energy conservation standards on U.S. production workers in the gas hearth DHE market.

TABLE V.33—POTENTIAL CHANGES IN THE TOTAL NUMBER OF DOMESTIC GAS HEARTH DIRECT HEATING EQUIPMENT PRODUCTION WORKERS IN 2013

	Trial standard level						
	Baseline	1	2	3	4	5	6
Total Number of Domestic Production Workers in 2013 (without changes in production locations)	1,243	1,250	1,250	1,250	1,759	1,759	2,089
Potential Changes in Domestic Production Workers in 2013*	.....	(1,243) – 7	(1,243) – 7	(1,243) – 7	(1,243) – 516	(1,243) – 516	(1,243) – 846

*DOE presents a range of potential employment impacts. Numbers in parentheses indicate negative numbers.

DOE does not expect significant employment impacts at TSL 1 through TSL 3. A substantial portion of the industry already has products that meet the requisite efficiencies required by these TSLs and DOE research suggests manufacturers can make products at these TSLs by replacing standing pilot ignition systems with electronic ignition systems. For TSL 4 through TSL 6, manufacturers would be increasingly likely to exit the market or reduce their product offerings. At TSL 4 and TSL 5, air circulating blowers are required and, at TSL 6, condensing operation is required, making these products increasingly complex. At these levels, manufacturers suggested the size of the gas hearth DHE market covered by today's rulemaking could be impacted due possible consumer reactions, which could also put additional pressure on domestic firms to consolidate or exit the market. A smaller market could reduce employment if the higher labor content required to manufacturer standards-compliant products is more than offset by a decline industry sales.

vi. Gas-Fired Pool Heater Employment Impacts

Using the GRIM, DOE estimates there would be 644 gas-fired pool heater production workers in the U.S. in 2013 in the absence of amended energy conservation standards. Using the Census Bureau data and interviews with manufacturers, DOE estimates that approximately 100 percent of gas-fired pool heaters sold in the United States are manufactured domestically. Table V.34 shows the impacts of potential amended energy conservations standards on U.S. production workers in the gas-fired pool heater industry.

TABLE V.34—POTENTIAL CHANGES IN THE TOTAL NUMBER OF DOMESTIC POOL HEATER PRODUCTION WORKERS IN 2013

	Trial standard level						
	Baseline	1	2	3	4	5	6
Total Number of Domestic Production Workers in 2013 (without changes in production locations)	644	657	678	710	737	807	975
Potential Changes in Domestic Production Workers in 2013 *	.....	(644) – 13	(644) – 34	(644) – 66	(644) – 93	(644) – 163	(644) – 331

* DOE presents a range of potential employment impacts. Numbers in parentheses indicate negative numbers.

DOE expects no significant direct employment impacts on gas-fired pool heater manufacturers for TSL 1 through TSL 4 because the technology options at these TSLs involve mostly component changes that do not greatly alter the labor content. For example, the technology changes for existing products that meet TSL 3 and TSL 4 involve power venting. While this technology would alter the installation of much of the installed base and cause manufacturers to increase the production of low-volume products, the basic assembly of the pool heaters at the point of manufacture is not substantially changed. Therefore, it is unlikely that employment levels would be substantially impacted. However, the existing products in the market at TSL 5 are near-condensing products and products at TSL 6 use fully condensing technology. The higher-efficiency products are typically more complex and take longer to assemble, resulting in an increase in employment if shipments levels are maintained. However, manufacturers have stated that the higher prices of higher-efficiency products could result in a smaller number of annual shipments, which could cause a corresponding reduction in industry employment as well. At TSL 5 and TSL 6, manufacturers are particularly concerned that the closer their products become to condensing technology, the higher the product costs would be and the more likely it is that amended energy conservation standards would cause a drop in industry-wide shipments. If manufacturers experienced a drop in total shipments, the domestic employment in the gas-fired pool heater industry could be negatively affected.

e. Impacts on Manufacturing Capacity

i. Residential Gas-Fired and Electric Storage Water Heaters

Amended energy conservation standards could cause short-term capacity constraints for gas-fired storage water heaters at TSL 7 and cause short-term capacity constraints for electric storage water heaters at TSL 6 and TSL 7. However, for the remaining TSLs, manufacturers could maintain capacity levels and continue to meet market demand under amended energy conservation standards.

DOE research suggests for the efficiency requirements for gas-fired storage water heaters could be met by adding more foam insulation to all volume sizes at TSL 1 through TSL 4 and TSL 6. These changes would not require gas-fired storage water heater manufacturers to greatly alter their existing production facilities or equipment and would not cause capacity constraints. DOE also acknowledges that TSL 5 could also result in a constrained market for large volume sizes if manufacturers do not make the required investments to offer gas-fired condensing water heaters at relatively low shipment volumes. DOE also recognizes there will likely be significant impacts on manufacturers at any TSL that effectively requires gas-fired condensing.

The dramatically different technology required at the max-tech level for gas-fired storage water heaters introduces problems that could cause short-term capacity constraints in the market. At TSL 7 (the max-tech level), all manufacturers would need to redesign all of their existing products because none currently offers residential water heaters that use condensing technology. Manufacturers would also have to retrain their installers and servicers to handle technology that varies tremendously from the majority of exiting products on the market. The fundamental fabrication and production equipment of gas-fired storage water heaters are substantially different for water heaters that use condensing technology. Equipment to manufacturer required heat exchangers and new tank designs would be required, as well as substantial changes to all subassembly and main assembly lines to handle the new technology. DOE estimates that manufacturers would incur over $110 million in capital conversion costs to make these plant modifications if all residential gas-fired storage water heaters required condensing technology. For comparison, the base-case estimate for the net PPE for gas-fired storage water heaters is approximately $166 million. This comparison of the estimate of current net PPE to the required capital conversion costs indicates the plant and equipment changes require manufacturers to almost completely modify or replace a substantial portion of their existing production assets for gas-fired storage water heaters. DOE also estimates that these changes would strand approximately $26 million of existing assists, mainly the book value of tank and coil equipment that can no longer be used with condensing technology. In addition, manufacturers believe that there could be problems with quality control to manufacture substantially more complex products on high-speed production lines. These problems could further increase the capital costs required if the line rates required manufacturers to install additional production lines. Manufacturers indicated that these potential problems and the extremely substantial changes that are required to their facilities could cause a constrained market until the production equipment is installed and the high-speed manufacturing of what are currently low-volume commercial products can be expanded to meet the demand of the gas-fired residential water heater market. Although these changes are substantial, DOE believes that the 5-year period before compliance with the standard is required would allow manufacturers sufficient time to make the necessary changes to meet demand for those products. The full range of products may not be available initially, however, since manufacturers would likely prioritize high-volume product lines ahead of lower-volume product lines.

For electric storage water heaters, TSL 1 through TSL 3 would require only minor changes to existing products to increase the tank insulation thickness. At TSL 4, more substantial plant modifications would be required because changes to the insulation thickness would require more foaming stations and additional production lines due to a lower throughput. However,

electric storage water heater manufacturers would be able to maintain manufacturing capacity levels and continue to meet market demand under amended energy conservation standards for these TSLs. These TSLs do not require prohibitively costly or complex changes to existing facilities or most products on the market today.

DOE also acknowledges that TSL 5 could also result in a constrained market for large volume sizes if manufacturers do not make the required investments to offer electric heat pump water heaters at relatively low shipment volumes. DOE also recognizes there will likely be significant impacts on manufacturers at any TSL that effectively requires electric heat pump water heaters.

Electric storage water heater manufacturers indicated that there could be potential capacity impacts at TSL 6 or TSL 7, which would effectively require heat pump technology. However, manufacturers of electric storage water heaters indicated that significant changes to production facilities would be required if amended energy conservation standards effectively mandated heat pump water heaters for all rated volume sizes (TSL 6 and TSL 7). Several manufacturers stated that they could move all or part of their production to Mexico to take advantage of lower labor costs if more complex heat pump water heaters were required. DOE believes manufacturers would likely source the heat pump module initially if they were required to exclusively manufacture heat pump water heaters. However, such a dramatic increase in the demand for heat pump modules could strain suppliers, especially in the short-term. Finally, manufacturers also stated that they have very little experience with manufacturing heat pump water heaters. Manufacturers indicated that the changes to their facilities (including potential plant sourcing decisions) could cause a constrained market until the production equipment is installed and any problems with high-speed manufacturing are resolved. As discussed in section IV.B.3.b, DOE acknowledges there could be issues with converting entire production lines to manufacture heat pump water heaters before the compliance date of this standard. Given the five-year delay in the compliance date with the amended standard from the issuance from the final rule, and the fact that many manufacturers are already developing heat pump water heaters, DOE believes manufacturers may be able to convert all their product lines before the compliance date of an amended energy conservation standard.

ii. Residential Oil-Fired Storage Water Heaters

While amended energy conservation standards could impact current market shares in the oil-fired storage water heater market, it is unlikely that standards would result in a constrained market. For oil-fired storage water heaters, the fundamental fabrication and assembly equipment would not be expected to change significantly in order to comply with TSL 1 through TSL 6. While DOE research suggests that products that meet TSL 1 through TSL 6 require relatively minor changes to the insulation material or thickness, the product conversion costs necessary at these TSLs could cause at least one manufacturer with significant market share to exit the residential oil-fired storage water heater market due to the low total shipment volumes. At any efficiency level that would likely require a multi-flue heat exchanger (*i.e.,* TSL 7), all but one manufacturer would need to make a significant and costly redesign of existing residential oil-fired product lines and related manufacturing facilities. These substantial changes could cause manufacturers to exit the residential oil-fired storage water heater market. However, even TSL 7 is unlikely to result in a constrained market even if any manufacturer exited the oil-fired residential water heater market. One residential oil-fired storage water heater manufacturer with significant market share has products that meet the max-tech level. Due to the low shipment volumes of oil-fired storage water heaters, this manufacturer could meet the total industry demand and industry-wide capacity would not be impacted.

iii. Gas-Fired Instantaneous Water Heaters

There may be short-term capacity constraints for gas-fired instantaneous water heaters at TSL 7. DOE research suggests that all gas-fired instantaneous water heaters are currently imported. If the amended energy conservation standards required more-efficient products than those currently offered, foreign manufacturers and parent companies would have to decide whether the relatively small market for gas-fired instantaneous water heaters in the United States could justify the required investments. DOE expects that TSL 1 through TSL 6 would be unlikely to disrupt supply to the United States because of the number of existing product lines that manufacturers could offer without substantial product develop would not greatly change at the required efficiencies. The number of existing product lines on the market drops substantially at TSL 7. There could be capacity constraints in response to amended energy conservation standards at TSL 7 if manufacturers that do not have compliant products chose not to develop them for the United States market due to the current size of the market.

iv. Traditional Direct Heating Equipment

Amended energy conservation standards could lead to a constrained traditional DHE market. DOE does not expect that traditional DHE manufacturers would need to substantially modify existing facilities in response to amended energy conservation standards at TSL 1 or TSL 2. However, at TSL 3 though TSL 6, some manufacturers would face complete product redesigns for either gas wall fan or gas room DHE. A complete redesign would entail significant product development, tooling, certification, and testing costs. Some manufacturers indicated that low shipment volumes would make these costs unjustifiable for many product lines, thereby leading to the discontinuation of those lines. Small businesses with less access to capital would be even more likely to face this problem than higher-volume, more diversified competitors, possibly resulting in further industry consolidation. Pressure that forced manufacturers to consolidate or exit the market could also strain the remaining manufacturers' capacity to increase production to meet industry demand. However at TSL 3, DOE believes that manufacturers have enough existing products in multiple product classes that they could selectively upgrade enough product lines to meet industry demand and remain in business. However, DOE believes setting an amended energy conservation standard above TSL 3 could lead to manufacturing capacity problems for certain product classes if manufacturers cannot make the tooling changes in time to meet the standard, if manufacturers do not have the resources to develop products that meet the required efficiencies, or if manufacturers discontinue product lines rather than invest an amount equal to the required conversion costs.

v. Gas Hearth Direct Heating Equipment

Gas hearth DHE manufacturers did not indicate that amended energy conservation standards would lead to a

constrained market. Rather, such manufacturers are concerned that more stringent energy conservation standards could exert additional pressures on companies to consolidate or exit the market. Manufacturers predict that unit shipments would decline increasingly as the amended energy conservation standard is set closer to max-tech (*i.e.,* TSL 6). Manufacturers also indicated that the high capital conversion costs would lead all manufacturers to drop product lines or not convert all existing product lines at TSL 4 through TSL 6 because of the smaller market for covered gas hearth products that is anticipated in the event of a more stringent amended energy conservation standard. The reduction in market demand and the lower number of product lines available would likely lead to an overcapacity of covered products within the industry, even if multiple lower-volume competitors exit the market.

vi. Gas-Fired Pool Heaters

Manufacturers indicated that, while other potentially negative impacts were possible at lower TSLs, industry capacity could be impacted at more stringent TSLs. At TSL 1 through TSL 4, DOE research suggests that manufacturers could retool without causing capacity constraints in the market. If DOE were to set amended energy conservation standards at near-condensing or condensing level, most gas-fired pool heater manufacturers stated that short-term production capacity could be affected. While only TSL 6 requires fully-condensing products, manufacturers indicated that adoption of amended standards at TSL 5 and above could cause them to manufacture only fully-condensing products in order to minimize longevity and warranty issues. Thus, TSL 5 and TSL 6 would require manufacturers to incur significant product and capital conversion costs. Consequently, DOE believes setting an amended energy conservation standard at or above TSL 5 could lead to short-term capacity problems if manufacturers cannot make the necessary tooling, equipment, and assembly changes in time to meet the standard.

f. Cumulative Regulatory Burden

While any one regulation may not impose a significant burden on manufacturers, the combined effects of several impending regulations may have serious consequences for some manufacturers, groups of manufacturers, or an entire industry. Assessing the impact of a single regulation may overlook this cumulative regulatory burden. In addition to energy conservation standards, other regulations can significantly affect manufacturers' financial operations. Multiple regulations affecting the same manufacturer can strain company-wide resources and can lead companies to abandon product lines or markets with lower expected future returns than competing products. For these reasons, DOE conducts an analysis of cumulative regulatory burden as part of its rulemakings pertaining to appliance efficiency. During previous stages of this rulemaking, DOE identified several requirements, in addition to amended energy conservation standards for the three types of heating products that manufacturers will face for products manufactured three years before and three years after the anticipated compliance date of the amended energy conservation standards.

During interviews and in their written comments, manufacturers stated that the most significant of these additional regulations are regional ultra-low-NO_X requirements and environmental and safety regulations. In response to the preliminary analysis, BWC commented that there is a substantial cost increase to comply with ultra-low-NO_X requirements. (BWC, No. 46 at p. 1) Noritz also stated that ultra-low-NO_X requirements are the most significant regulation that will affect the gas-fired instantaneous water heating industry (Noritz, No. 36 at p. 3). AHRI and Rheem stated that gas-fired instantaneous water heater manufacturers will have to comply with ultra-low-NO_X emissions requirements in 2012. (AHRI, Public Meeting Transcript, No. 34.4 at p. 134; Rheem, No. 48 at p. 7)

Low and ultra-low-NO_X regulations for gas-fired water heaters are being implemented regionally by air quality management districts, including the South Coast Air Quality Management District (SCAQMD), the Bay Area Air Quality Management District (BAAQMD), the San Joaquin Valley Unified Air Pollution Control District (the Valley Air District), and the Texas Commission on Environmental Equality (TCEQ). The ultra-low-NO_X regional standards currently in place only cover gas-fired storage water heaters, but manufacturers are concerned that these standards could eventually affect additional types of gas-fired equipment. While the SCAQMD, the BAAQMD, and the Valley Air District all mandate ultra-low-NO_X requirements, the TCEQ only has low-NO_X requirements.

DOE accounted for the added cost for manufacturers of gas-fired storage water heaters to comply with regional ultra-low NO_X requirements (see section IV.C.2). DOE agrees with Noritz, AHRI, and Rheem that ultra-low-NO_X requirements may affect instantaneous gas water heaters beginning in 2012. While the SCAQMD does not distinguish between gas-fired storage and gas-fired instantaneous water heaters, the BAAQMD and the Valley Air District have separate ultra-low-NO_X regulations for natural gas-fired instantaneous water heaters. Although the compliance dates of these regulations are pending, DOE is not aware of any ultra-low-NO_X instantaneous gas-fired water heaters currently on the market. Consequently, DOE could not create a separate cost curve to account for the additional cost of instantaneous water heaters that will meet the upcoming ultra-low-NO_X emissions requirements.

There are also existing FVIR and low and ultra-low-NO_X requirements for gas-fired storage water heaters, ignition source requirements, amended energy conservation standards for other products made by heating products manufacturers, State energy conservation standards for other products, and international energy conservation standards. The cumulative burden focuses on other product-specific Federal requirements with a compliance date three years prior to and three years after the anticipated compliance dates of the amended energy conservation standards of this rulemaking. However, DOE discusses these and other regulations and includes the full details of the cumulative regulatory burden in chapter 12 of the NOPR TSD.

g. Impacts on Small Businesses

As discussed in section IV.H.1.c, using average cost assumptions to develop an industry cash-flow estimate is not adequate for assessing differential impacts among manufacturer subgroups. Small manufacturers, niche equipment manufacturers, and manufacturers exhibiting a cost structure substantially different from the industry average could be affected disproportionately. DOE used the results of the industry characterization to group manufacturers exhibiting similar characteristics. Consequently, the only subgroup DOE identified was small manufacturers.

DOE evaluated the impact of amended energy conservation standards on small manufacturers, as defined by SBA. As a result, DOE identified five residential water heater manufacturers, 12 DHE manufacturers, and one small gas-fired pool heater manufacturer that are classified as small businesses per the SBA definition. DOE describes the

differential impacts on these small businesses in section VI.B of today's notice. For a complete discussion of the impacts on small businesses, see chapter 12 of the NOPR TSD.

3. National Impact Analysis

a. Significance of Energy Savings

To estimate the energy savings attributable to potential standards, DOE compared the energy consumption of the heating products under the base case (no standards) to anticipated energy consumption of these products under each TSL. Table V.35 through Table V.37 present DOE's NES estimates by product type and class for each TSL. Chapter 10 of the NOPR TSD describes these estimates in more detail.

TABLE V.35—WATER HEATERS: CUMULATIVE NATIONAL ENERGY SAVINGS IN QUADS

Product class	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6	TSL 7
Gas-Fired Storage	0.83	1.29	1.29	1.29	1.46	1.29	5.33
Electric Storage	0.35	0.49	0.90	1.21	2.18	9.05	10.62
Oil-Fired Storage	0.01	0.01	0.01	0.01	0.01	0.01	0.03
Gas-Fired Instantaneous	0.08	0.08	0.08	0.08	0.08	0.08	0.87
Total	1.26	1.88	2.28	2.60	3.74	10.44	16.85

TABLE V.36—DIRECT HEATING EQUIPMENT: CUMULATIVE NATIONAL ENERGY SAVINGS IN QUADS

Product class	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6
Gas Wall Fan	0.007	0.01	0.01	0.02	0.01	0.02
Gas Wall Gravity	0.008	0.02	0.06	0.06	0.10	0.10
Gas Floor	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Gas Room	0.002	0.00	0.01	0.01	0.03	0.03
Gas Hearth	0.136	0.14	0.14	0.30	0.30	0.93
Total	0.15	0.17	0.22	0.39	0.44	1.08

TABLE V.37—POOL HEATERS: CUMULATIVE NATIONAL ENERGY SAVINGS IN QUADS

	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6
Gas-Fired	0.02	0.03	0.08	0.10	0.13	0.28

b. Net Present Value of Consumer Costs and Benefits

DOE estimated the cumulative NPV to the Nation of total heating product consumer costs and savings that would result from particular standard levels. In accordance with the OMB Circular A–4, DOE calculated the NPV using both a 7-percent and a 3-percent real discount rate. The 7-percent rate is an estimate of the average before-tax rate of return to private capital in the U.S. economy, and reflects the returns to real estate and small business capital as well as corporate capital. DOE used this discount rate to approximate the opportunity cost of capital in the private sector, as OMB analysis has found the average rate of return to capital to be near this rate. In addition, DOE used the 3-percent rate to capture the potential effects of amended standards on private consumption (*e.g.,* through higher prices for products and reduced purchases of energy). This rate represents the rate at which society discounts future consumption flows to their present value. This rate can be approximated by the real rate of return on long-term government debt (*i.e.,* yield on Treasury notes minus annual rate of change in the Consumer Price Index), which has averaged about 3 percent on a pre-tax basis for the last 30 years.

Table V.38 through Table V.40 show the consumer NPV results for each TSL DOE considered for the three types of heating products, using both a 7-percent and a 3-percent discount rate. See chapter 10 of the NOPR TSD for more detailed NPV results.

TABLE V.38—CUMULATIVE NET PRESENT VALUE OF CONSUMER BENEFITS FOR WATER HEATERS

[Impacts for units sold from 2015 to 2045]

Product class		TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6	TSL 7
		billion 2008 dollars						
Discounted at 3%	Gas-Fired Storage	7.58	9.04	9.04	9.04	9.63	9.04	11.27
	Electric Storage	2.19	3.16	4.73	6.02	11.67	31.90	41.94
	Oil-Fired Storage	0.12	0.20	0.28	0.28	0.28	0.28	0.47
	Gas-Fired Instantaneous	0.30	0.30	0.30	0.30	0.30	0.30	−5.68
	Total	10.20	12.71	14.36	15.64	21.89	41.52	47.99
Discounted at 7%	Gas-Fired Storage	2.94	3.09	3.09	3.09	3.17	3.09	−1.10
	Electric Storage	0.69	1.03	1.32	1.59	3.35	5.22	8.50
	Oil-Fired Storage	0.05	0.09	0.12	0.12	0.12	0.12	0.19

TABLE V.38—CUMULATIVE NET PRESENT VALUE OF CONSUMER BENEFITS FOR WATER HEATERS—Continued

[Impacts for units sold from 2015 to 2045]

	Gas-Fired Instantaneous.	0.01	0.01	0.01	0.01	0.01	0.01	−4.84
	Total	3.69	4.20	4.53	4.79	6.64	8.43	2.75

TABLE V.39—CUMULATIVE NET PRESENT VALUE OF CONSUMER BENEFITS FOR DIRECT HEATING EQUIPMENT

[Impacts for units sold from 2013 to 2043]

Product class		TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6
		billion 2008 dollars					
Discounted at 3%	Gas Wall Fan	0.07	0.09	0.11	0.14	0.07	0.14
	Gas Wall Gravity	0.07	0.22	0.52	0.52	0.37	0.37
	Gas Floor	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
	Gas Room	0.02	0.05	0.08	0.08	0.35	0.35
	Gas Hearth	1.52	1.52	1.52	−1.06	−1.06	−3.49
	Total	1.68	1.87	2.22	−0.33	−0.26	−2.63
Discounted at 7%	Gas Wall Fan	0.03	0.04	0.04	0.04	0.03	0.04
	Gas Wall Gravity	0.03	0.09	0.20	0.20	0.06	0.06
	Gas Floor	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
	Gas Room	0.01	0.02	0.03	0.03	0.14	0.14
	Gas Hearth	0.64	0.64	0.64	−1.16	−1.16	−3.78
	Total	0.71	0.79	0.91	−0.89	−0.93	−3.54

TABLE V.40—CUMULATIVE NET PRESENT VALUE OF CONSUMER BENEFITS FOR POOL HEATERS

[Impacts for units sold from 2013 to 2043]

	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6
	billion 2008 dollars					
Discounted at 3%	0.16	0.18	0.40	0.25	−1.97	−4.51
Discounted at 7%	0.08	0.07	0.14	0.03	−1.27	−2.94

c. Net Present Value of Benefits From Energy Price Impacts

DOE estimated the cumulative NPV of the economy-wide savings in natural gas expenditures during the forecast period due to the projected decline in natural gas prices resulting from amended standards on water heaters. DOE calculated the cumulative NPV for the efficiency levels in each product class corresponding to each TSL using both a 7-percent and a 3-percent discount rate (Table V.41). (The impact of amended standards for direct heating equipment and pool heaters was not estimated for the reasons explained in section IV.F.) See chapter 10 of the NOPR TSD for further details. As discussed in section IV.F.2.g, DOE was not able to estimate the impact of the considered TSLs on electricity prices.

TABLE V.41—CUMULATIVE NPV OF THE ECONOMY-WIDE SAVINGS IN NATURAL GAS EXPENDITURES DUE TO THE PROJECTED DECLINE IN NATURAL GAS PRICES RESULTING FROM AMENDED STANDARDS FOR WATER HEATERS*

Discount Rate	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6	TSL 7
	billion $2008						
3 percent	3.0	4.5	5.1	5.6	7.1	23.6	47.7
7 percent	1.4	2.2	2.5	2.7	3.4	12.0	24.2

* Impacts for units sold from 2015 to 2045.

d. Impacts on Employment

Employment impacts consist of direct and indirect impacts. Direct employment impacts are any changes in the number of employees of manufacturers of the appliance products that are the subject of this rulemaking, their suppliers, and related service firms. Indirect employment impacts are changes in employment in the larger economy that occur due to the shift in expenditures and capital investment caused by the purchase and operation of more-efficient appliances. The MIA addresses the direct employment impacts that concern manufacturers of the three heating products (see section V.B.2 above).

To estimate the indirect employment impacts of potential amended energy conservation standards, DOE used an input/output model of the U.S. economy

(see section IV.I)). The input/output model results suggest that amended standards would be likely to increase the net demand for labor in the economy slightly. Table V.42 presents the estimated net indirect employment impacts from the TSLs that DOE considered for water heaters. The estimated impacts from the potential amended standards for DHE and pool heaters would be much smaller. (Note that the input/output model DOE uses does not report the quality or wage level of the jobs.) See chapter 14 of the NOPR TSD for more detailed results.

TABLE V.42—NET INCREASE IN NATIONAL INDIRECT EMPLOYMENT UNDER WATER HEATER TSLS

Trial standard level	2015 *thousands*	2020 *thousands*	2030 *thousands*	2044 *thousands*
1	−0.17	1.02	2.58	3.32
2	−0.46q	1.20	3.36	4.38
3	-0.55	1.97	5.27	6.70
4	−0.62	2.58	6.75	8.49
5	−0.77	5.63	13.95	17.82
6	−2.47	18.48	45.72	55.67
7	−6.98	19.37	54.03	68.11

While DOE's analysis suggests that amended standards could increase the net demand for labor in the economy, the estimated gains would be very small relative to total national employment. Therefore, DOE has tentatively concluded that the considered standard levels would be likely to produce employment benefits sufficient to fully offset any adverse impacts on employment in the manufacturing industries related to the three types of heating products that are the subject of this rulemaking.

4. Impact on Utility or Performance of Products

As discussed in section III.D.1.d, DOE has tentatively concluded that none of the efficiency levels considered in this notice would reduce the utility or performance of the three types of heating products. Furthermore, manufacturers of these products currently offer heating products that meet or exceed the proposed standards. (42 U.S.C. 6295(o)(2)(B)(i)(IV))

5. Impact of Any Lessening of Competition

DOE has also considered any lessening of competition likely to result from amended standards. The Attorney General determines the impact, if any, of any lessening of competition likely to result from a proposed standard, and transmits its determination to the Secretary, together with an analysis of the nature and extent of the impact. (42 U.S.C. 6295(o)(2)(B)(i)(V) and (ii))

To assist the Attorney General in making such a determination, DOE has provided DOJ with copies of this notice and the TSD for review. DOE will consider DOJ's comments on the proposed rule in preparing the final rule, and DOE will publish and respond to DOJ's comments in that document.

6. Need of the Nation To Conserve Energy

Improving the energy efficiency of heating products when economically justified would likely improve the security of the Nation's energy system by reducing overall demand for energy. (42 U.S.C. 6295(o)(2)(B)(i)(VI)) Reduced electricity demand may also improve the reliability of the electricity system.

Energy savings from amended standards for heating products could also produce environmental benefits in the form of reduced emissions of air pollutants and greenhouse gases associated with energy production and the use of fossil fuels at the sites where heating products are used. Table V.43 and Table V.44 provide DOE's estimate of cumulative CO_2, NO_X, and Hg emissions reductions that would be expected to result from the TSLs considered in this rulemaking. In the environmental assessment (chapter 16 of the NOPR TSD), DOE reports the estimated annual change in CO_2, NO_X, and Hg emissions attributable to each TSL.

For DHE, DOE estimates a very slight increase in Hg emissions under the proposed standard. The reason for this result is that the more-efficient products save natural gas, but they also use more electricity due to electronic ignition and, for some DHE TSLs, use of a fan. This results in higher electricity generation than in the reference case, which leads to higher emissions. However, because the increase in electricity that these more efficient products are projected to use is comparatively small when compared to the reduction in natural gas usage, there will be an overall efficiency gain from the proposed standard. For CO_2 and NO_X, the higher emissions from the power sector would also be canceled out by lower household emissions from gas combustion, resulting in a total emissions decrease under the considered TSLs. This is not the case for Hg because there are no household Hg emissions to offset.

As discussed in section IV.K, DOE does not report SO_2 emissions reductions from power plants because there is uncertainty about the effect of energy conservation standards on the overall level of SO_2 emissions in the United States due to SO_2 emissions caps. DOE also did not include NO_X emissions reduction from power plants in States subject to CAIR because an energy conservation standard would not affect the overall level of NO_X emissions in those States due to the emissions caps mandated by CAIR.

TABLE V.43—SUMMARY OF EMISSIONS REDUCTIONS UNDER WATER HEATER TSLS

[Cumulative throughout forecast period]

Emission Type	TSL						
	1	2	3	4	5	6	7
CO_2 (Mt)	88.7	136.8	146.6	153.8	217.0	346.0	965.5
NO_X (kt)	68.5	106	113	118	165	254	730

TABLE V.43—SUMMARY OF EMISSIONS REDUCTIONS UNDER WATER HEATER TSLS—Continued

[Cumulative throughout forecast period]

Emission Type	TSL						
	1	2	3	4	5	6	7
Hg (t)	0.11	0.16	0.19	0.20	0.60	2.18	4.43

TABLE V.44—SUMMARY OF EMISSIONS REDUCTIONS UNDER DIRECT HEATING EQUIPMENT AND POOL HEATER TSLS

[Cumulative throughout forecast period]

Emission Type	TSL					
	1	2	3	4	5	6
Direct Heating Equipment						
CO_2 (Mt)	6.32	7.02	8.52	16.69	18.46	42.97
NO_X (kt)	5.79	6.42	7.74	15.2	16.9	39.6
Hg (t)	(0.02)	(0.02)	(0.02)	(0.00)	(0.01)	(0.01)
Pool Heaters						
CO_2 (Mt)	0.610	1.05	3.31	4.21	5.74	12.12
NO_X (kt)	0.55	0.94	2.98	3.74	5.10	10.77
Hg (t)	0.00	0.00	0.01	0.00	0.00	0.00

DOE estimated the cumulative monetary value of the economic benefits associated with CO_2 emissions reductions expected to result from amended standards for the three types of heating products. As discussed in section IV.K, in considering the potential global benefits resulting from reduced CO_2 emissions, DOE used values based on a social cost of carbon of approximately $5, $10, $20, $34 and $56 per metric ton avoided in 2007 (values expressed in 2008$). DOE also calculated the domestic benefits based on a value of approximately $1 per metric ton avoided in 2007. To monetize the CO_2 emissions reductions expected to result from amended standards for heating products in 2013–2045, DOE escalated the above values for 2007 using a three-percent escalation rate. For each of the three types of heating products, DOE calculated the cumulative monetary value for each TSL using both a 7-percent and 3-percent discount rate (see Table V.45 through Table V.50).

TABLE V.45—ESTIMATES OF THE VALUE OF CO_2 EMISSIONS REDUCTIONS FOR WATER HEATERS UNDER TRIAL STANDARD LEVELS USING 7% DISCOUNT RATE

TSL	Value of estimated CO_2 emission reductions (million 2008$)*					
	Domestic	Global				
	CO_2 value of $1/metric ton CO_2	CO_2 value of $5/metric ton CO_2	CO_2 value of $10/metric ton CO_2	CO_2 value of $20/metric ton CO_2	CO_2 value of $34/metric ton CO_2	CO_2 value of $56/metric ton CO_2
1	48.0	211	421	800	1,390	2,317
2	74.1	325	650	1,235	2,145	3,575
3	79.4	348	697	1,324	2,299	3,832
4	83.4	366	732	1,390	2,414	4,024
5	112	492	983	1,869	3,246	5,409
6	171	749	1,497	2,845	4,941	8,235
7	487	2,134	4,268	8,110	14,085	23,476

* Unit values are approximate and are based on escalating 2007$ to 2008$ for consistency with other values presented in this notice.

TABLE V.46—ESTIMATES OF THE VALUE OF CO_2 EMISSIONS REDUCTIONS FOR WATER HEATERS UNDER TRIAL STANDARD LEVELS USING 3% DISCOUNT RATE

TSL	Value of estimated CO_2 emission reductions (million 2008$)*					
	Domestic	Global				
	CO_2 value of $1/metric ton CO_2	CO_2 value of $5/metric ton CO_2	CO_2 value of $10/metric ton CO_2	CO_2 value of $20/metric ton CO_2	CO_2 value of $34/metric ton CO_2	CO_2 value of $56/metric ton CO_2
1	110	480	961	1,826	3,171	5,285
2	169	741	1,482	2,816	4,890	8,151
3	181	794	1,588	3,017	5,239	8,732

TABLE V.46—ESTIMATES OF THE VALUE OF CO_2 EMISSIONS REDUCTIONS FOR WATER HEATERS UNDER TRIAL STANDARD LEVELS USING 3% DISCOUNT RATE—Continued

TSL	Value of estimated CO_2 emission reductions (million 2008$)*					
	Domestic	Global				
	CO_2 value of $1/metric ton CO_2	CO_2 value of $5/metric ton CO_2	CO_2 value of $10/metric ton CO_2	CO_2 value of $20/metric ton CO_2	CO_2 value of $34/metric ton CO_2	CO_2 value of $56/metric ton CO_2
4	190	833	1,666	3,166	5,499	9,166
5	265	1,162	2,325	4,417	7,672	12,787
6	416	1,824	3,648	6,932	12,040	20,066
7	1,170	5,132	10,263	19,500	33,868	56,447

*Unit values are approximate and are based on escalating 2007$ to 2008$ for consistency with other values presented in this notice.

TABLE V.47—ESTIMATES OF THE VALUE OF CO_2 EMISSIONS REDUCTIONS FOR DIRECT HEATING EQUIPMENT UNDER TRIAL STANDARD LEVELS USING 7% DISCOUNT RATE

TSL	Value of estimated CO_2 emission reductions (million 2008$)*					
	Domestic	Global				
	CO_2 value of $1/metric ton CO_2	CO_2 value of $5/metric ton CO_2	CO_2 value of $10/metric ton CO_2	CO_2 value of $20/metric ton CO_2	CO_2 value of $34/metric ton CO_2	CO_2 value of $56/metric ton CO_2
1	3.69	16.2	32.4	61.5	107	178
2	4.09	18.0	35.9	68.2	119	198
3	4.96	21.8	43.6	82.8	144	240
4	9.78	42.9	85.8	163	283	472
5	10.8	47.4	94.8	180	313	521
6	25.2	111	221	420	730	1,216

*Unit values are approximate and are based on escalating 2007$ to 2008$ for consistency with other values presented in this notice.

TABLE V.48—ESTIMATES OF THE VALUE OF CO_2 EMISSIONS REDUCTIONS FOR DIRECT HEATING EQUIPMENT UNDER TRIAL STANDARD LEVELS USING 3% DISCOUNT RATE

TSL	Value of estimated CO_2 emission reductions (million 2008$)*					
	Domestic	Global				
	CO_2 value of $1/metric ton CO_2	CO_2 value of $5/metric ton CO_2	CO_2 value of $10/metric ton CO_2	CO_2 value of $20/metric ton CO_2	CO_2 value of $34/metric ton CO_2	CO_2 value of $56/metric ton CO_2
1	7.81	34.3	68.5	130	226	377
2	8.68	38.1	76.1	145	251	419
3	10.5	46.2	92.4	176	305	508
4	20.6	90.5	181	344	598	996
5	22.8	100	200	380	661	1,101
6	53.1	233	466	886	1,538	2,564

*Unit values are approximate and are based on escalating 2007$ to 2008$ for consistency with other values presented in this notice.

TABLE V.49—ESTIMATES OF THE VALUE OF CO_2 EMISSIONS REDUCTIONS FOR POOL HEATERS UNDER TRIAL STANDARD LEVELS USING 7% DISCOUNT RATE

TSL	Value of estimated CO_2 emission reductions (million 2008$)*					
	Domestic	Global				
	CO_2 value of $1/metric ton CO_2	CO_2 value of $5/metric ton CO_2	CO_2 value of $10/metric ton CO_2	CO_2 value of $20/metric ton CO_2	CO_2 value of $34/metric ton CO_2	CO_2 value of $56/metric ton CO_2
1	0.37	1.63	3.27	6.21	10.8	18.0
2	0.64	2.81	5.61	10.7	18.5	30.9
3	2.02	8.86	17.7	33.7	58.5	97.4
4	2.55	11.2	22.4	42.5	73.	123
5	3.47	15.2	30.5	57.9	101	168
6	7.33	32.8	64.3	122	212	354

*Unit values are approximate and are based on escalating 2007$ to 2008$ for consistency with other values presented in this notice.

TABLE V.50—ESTIMATES OF THE VALUE OF CO_2 EMISSIONS REDUCTIONS FOR POOL HEATERS UNDER TRIAL STANDARD LEVELS USING 3% DISCOUNT RATE

TSL	Value of estimated CO_2 emission reductions (million 2008$)*					
	Domestic	Global				
	CO_2 value of $1/metric ton CO_2	CO_2 value of $5/metric ton CO_2	CO_2 value of $10/metric ton CO_2	CO_2 value of $20/metric ton CO_2	CO_2 value of $34/metric ton CO_2	CO_2 value of $56/metric ton CO_2
1	0.75	3.31	6.62	12.6	21.8	36.4
2	1.30	5.69	11.4	21.6	37.5	62.5
3	4.09	18.0	35.9	68.2	118	197
4	5.21	22.8	45.7	86.8	151	251
5	7.10	31.1	62.2	118	205	342
6	15.0	65.7	131	250	434	723

* Unit values are approximate and are based on escalating 2007$ to 2008$ for consistency with other values presented in this notice.

DOE also estimated a range for the cumulative monetary value of the economic benefits associated with NO_X and Hg emissions reductions anticipated to result from amended standards for the three types of heating products under consideration in this rulemaking. Table V.51 through Table V.54 present the results for NO_X emissions reductions. Table V.53 presents the results for Hg emissions reductions for water heaters. The values for Hg emissions reductions for direct heating equipment and pool heater TSLs are negligible.

TABLE V.51—ESTIMATES OF THE VALUE OF NO_X EMISSIONS REDUCTIONS FOR WATER HEATERS UNDER TRIAL STANDARD LEVELS

TSL	Value at 7% discount rate *million 2008$*	Value at 3% discount rate *million 2008$*
1	7.44–76.4	15.9–163
2	11.5–118	24.5–252
3	12.3–126	26.2–269
4	12.9–132	27.4–282
5	16.4–168	36.6–377
6	23.0–236	54.1–556
7	69.1–710	159–1,632

TABLE V.52—ESTIMATES OF THE VALUE OF NO_X EMISSIONS REDUCTIONS FOR DIRECT HEATING EQUIPMENT UNDER TRIAL STANDARD LEVELS

TSL	Value at 7% discount rate *million 2008$*	Value at 3% discount rate *million 2008$*
1	0.71–7.26	1.41–14.51
2	0.78–8.04	1.56–16.07
3	0.94–9.68	1.89–19.39
4	1.87–19.2	3.73–38.32
5	2.07–21.3	4.13–42.50
6	4.86–50.0	9.67–99.45

TABLE V.53—ESTIMATES OF THE VALUE OF NO_X EMISSIONS REDUCTIONS FOR POOL HEATERS UNDER TRIAL STANDARD LEVELS

TSL	Value at 7% discount rate *million 2008$*	Value at 3% discount rate *million 2008$*
1	0.07–0.75	0.14–1.43
2	0.12–1.28	0.24–2.45
3	0.39–4.05	0.75–7.73
4	0.49–5.03	0.94–9.66
5	0.67–6.86	1.28–13.16
6	1.41–14.49	2.70–27.80

TABLE V.54—ESTIMATES OF THE VALUE OF MERCURY EMISSIONS REDUCTIONS FOR WATER HEATERS UNDER TRIAL STANDARD LEVELS

TSL	Value at 7% discount rate *million 2008$*	Value at 3% discount rate *million 2008$*
1	0.03–1.20	0.05–2.17
2	0.04–1.82	0.07–3.30
3	0.05–2.07	0.08–3.74
4	0.05–2.25	0.09–4.09
5	0.16–6.94	0.28–12.53
6	0.49–21.7	0.93–41.7
7	0.99–44.1	1.90–84.8

The NPV of the monetized benefits associated with emissions reductions can be viewed as a complement to the NPV of the consumer savings calculated for each TSL considered in this rulemaking. Table V.55 presents the NPV values for water heaters that would result if DOE were to add the low- and high-end estimates of the potential benefits resulting from reduced CO_2, NO_X and Hg emissions to the NPV of consumer savings calculated for each TSL considered in this rulemaking, at both a 7- and 3-percent discount rate. Table V.56 presents the NPV values for DHE that would result if DOE were to add the low- and high-end estimates of the potential global benefits resulting from reduced CO_2 emissions to the NPV of consumer savings calculated for each TSL considered in this rulemaking, at both a 7- and 3-percent discount rate. Table V.57 presents the same NPV values for pool heaters. For CO_2, only the low and high global benefit values are used for these tables ($5 and $56 in 2008$).

Although adding the value of consumer savings to the values of emission reductions provides a valuable perspective, please note the following: 1) the national consumer savings are domestic U.S. consumer monetary savings found in market transactions, while the values of emission reductions are based on ranges of estimates of imputed marginal social costs, which, in the case of CO_2, are meant to reflect global benefits; and 2) the assessments of consumer savings and emission-related benefits are performed with different computer models, leading to different time frames for the analyses. For water heaters, for example, the present value of national consumer savings is measured for the period 2015–2065 (30 years from 2015 to 2045, plus the longest lifetime of the equipment shipped in the 30th year). However, the time frames of the benefits associated with the emission reductions differ. For example, the value of CO_2 emission reductions is meant to reflect the present value of all future climate-related impacts, even those beyond 2065.

DOE seeks comment on its presentation of NPV values and on the consideration of GHG emissions in future energy conservation standards rulemakings, including alternative methodological approaches to including GHG emissions in its analysis. More specifically, DOE seeks comment on both how it integrates monetized GHG emissions or Social Cost of Carbon values, as well as other monetized benefits or costs, into its analysis and models, and also on suggested alternatives to the current approach.

TABLE V.55—ESTIMATES OF ADDING NPV OF CONSUMER SAVINGS TO NPV OF LOW- AND HIGH-END GLOBAL MONETIZED BENEFITS FROM CO_2, NO_X, AND HG EMISSIONS REDUCTIONS AT ALL TSLS FOR WATER HEATERS AT 3- AND 7-PERCENT DISCOUNT RATES

TSL	CO_2 value of $5/metric ton CO_2* and low values for NO_X and Hg** *billion 2008$*		CO_2 value of $56/metric ton CO_2* and high values for NO_X and Hg*** *billion 2008$*	
	7-percent discount rate	3-percent discount rate	7-percent discount rate	3-percent discount rate
1	3.90	10.7	6.08	15.6
2	4.54	13.5	7.90	21.1
3	4.89	15.2	8.49	23.4
4	5.17	16.5	8.95	25.1
5	7.14	23.1	12.2	35.1
6	9.20	43.4	16.9	62.2
7	4.95	53.3	27.0	106

* These values per ton represent the global negative externalities of CO_2.
** Low Value corresponds to a value of $442 per ton of NO_X emissions and $0.745 million per ton of Hg emissions.
*** High Value corresponds to a value of $4,540 per ton of NO_X emissions and $33.3 million per ton of Hg emissions.

TABLE V.56—ESTIMATES OF ADDING NPV OF CONSUMER SAVINGS TO NPV OF LOW- AND HIGH-END GLOBAL MONETIZED BENEFITS FROM CO_2, NO_X, AND HG EMISSIONS REDUCTIONS AT ALL TSLS FOR DHE AT 3- AND 7-PERCENT DISCOUNT RATES

TSL	CO_2 value of $5/metric ton CO_2* and low values for NO_X and Hg** *billion 2008$*		CO_2 value of $56/metric ton CO_2* and high values for NO_X and Hg*** *billion 2008$*	
	7-percent discount rate	3-percent discount rate	7-percent discount rate	3-percent discount rate
1	0.722	1.72	0.890	2.07
2	0.804	1.91	0.991	2.31
3	0.938	2.27	1.16	2.75
4	(0.840)	(0.233)	(0.394)	0.707
5	(0.855)	(0.156)	(0.392)	0.884
6	(3.42)	(2.38)	(2.27)	0.038

* These values per ton represent the global negative externalities of CO_2.
** Low Value corresponds to a value of $442 per ton of NO_X emissions and $0.745 million per ton of Hg emissions.
*** High Value corresponds to a value of $4,540 per ton of NO_X emissions and $33.3 million per ton of Hg emissions.

TABLE V.57—ESTIMATES OF ADDING NPV OF CONSUMER SAVINGS TO NPV OF LOW- AND HIGH-END MONETIZED BENEFITS FROM CO_2, NO_X, AND HG EMISSIONS REDUCTIONS AT ALL TSLS FOR POOL HEATERS AT 3- AND 7-PERCENT DISCOUNT RATES

TSL	CO_2 value of $5/metric ton CO_2* and low values for NO_X and Hg** *billion 2008$*		CO_2 value of $56/metric ton CO_2* and high values for NO_X and Hg*** *billion 2008$*	
	7-percent discount rate	3-percent discount rate	7-percent discount rate	3-percent discount rate
1	0.077	0.019	0.094	0.053
2	0.078	0.033	0.107	0.092
3	0.147	0.100	0.239	0.287
4	0.044	0.121	0.161	0.358
5	(1.25)	0.166	(1.09)	0.489
6	(2.90)	0.353	(2.57)	1.03

* These values per ton represent the global negative externalities of CO_2.
** Low Value corresponds to a value of $442 per ton of NO_X emissions and $0.745 million per ton of Hg emissions.
*** High Value corresponds to a value of $4,540 per ton of NO_X emissions and $33.3 million per ton of Hg emissions.

TABLE V.58—ESTIMATES OF ADDING NPV OF CONSUMER SAVINGS TO NPV OF LOW- AND HIGH-END MONETIZED BENEFITS FROM CO_2 EMISSIONS REDUCTIONS AT ALL TSLS FOR WATER HEATERS, DHE AND POOL HEATERS AT 3- AND 7-PERCENT DISCOUNT RATE

TSL	CO_2 value of $5/metric ton CO_2* and low values for NO_X and Hg** *billion 2008$*		CO_2 value of $56/metric ton CO_2* and high values for NO_X and Hg*** *billion 2008$*	
	7-percent discount rate	3-percent discount rate	7-percent discount rate	3-percent discount rate
1	4.69	12.4	2,517	5,710
2	5.41	15.4	3,808	8,647
3	5.96	17.5	4,174	9,455
4	4.36	16.4	4,622	10,428
5	4.99	23.1	6,102	14,252
6	2.85	41.3	9,807	23,392
7	1.45	51.1	25,042	59,779

* These values per ton represent the global negative externalities of CO_2.
** Low Value corresponds to a value of $442 per ton of NO_X emissions and $0.745 million per ton of Hg emissions.
*** High Value corresponds to a value of $4,540 per ton of NO_X emissions and $33.3 million per ton of Hg emissions.

7. Other Factors

In determining whether a standard is economically justified, the Secretary of Energy may consider any other factors that the Secretary deems to be relevant. (42 U.S.C. 6295(o)(2)(B)(i)(VII)) The Secretary has decided that the LCC impacts on identifiable groups of consumers, such as senior citizens and residents of multi-family housing who may be disproportionately affected by any national energy conservation standard level, is a relevant factor. The impacts on the identified consumer

subgroups are described in section V.B.1 above.

DOE also believes that uncertainties associated with the heat pump water heater market (*e.g.,* product availability) are relevant to consider. These uncertainties are discussed in section V.C below.

C. Proposed Standards

When considering proposed standards, DOE recognizes that EPCA specifies that any new or amended energy conservation standard for any type (or class) of covered product shall be designed to achieve the maximum improvement in energy efficiency that the Secretary determines is technologically feasible and economically justified. (42 U.S.C. 6295(o)(2)(A)) In determining whether a standard is economically justified, the Secretary must determine whether the benefits of the standard exceed its burdens to the greatest extent practicable, in light of the seven statutory factors discussed previously. (42 U.S.C. 6295(o)(2)(B)(i)) The new or amended standard must also ''result in significant conservation of energy.'' (42 U.S.C. 6295(o)(3)(B))

DOE considered the impacts of standards at each trial standard level, beginning with the maximum technologically feasible level, to determine whether each level was economically justified. If the max-tech level is not justified, DOE then considers the next most efficient level and undertakes the same evaluation until it reached the highest level that is both technologically feasible and economically justified, and saves a significant amount of energy.

To aid the reader as DOE discusses the benefits and/or burdens of each trial standard level, the tables in the following sections present summaries of the results of DOE's quantitative analysis at each TSL for each of the three heating products based on the methodology discussed above. Additional quantitative results (*e.g.,* the cumulative NPV to natural gas consumers of the economy-wide savings in natural gas expenditures during the forecast period due to the projected decline in natural gas prices resulting from amended standards on the three types of heating products) are provided in section V.B.3.

In addition to the quantitative results, DOE also considers other burdens and benefits that affect economic justification. These include the LCC impacts on identifiable subgroups of consumers, such as seniors and residents of multi-family housing, who may be disproportionately affected by any national energy conservation standard level, and the uncertainties associated with the heat pump water heater market.

DOE also notes that the economics literature provides a wide-ranging discussion of how consumers trade-off upfront costs and energy savings in the absence of government intervention. Much of this literature attempts to explain why consumers appear to undervalue energy efficiency improvements. This undervaluation suggests that regulation that promotes energy efficiency can produce significant net private gains (as well as producing social gains by, for example, reducing pollution). There is evidence that consumers undervalue future energy savings as a result of (1) A lack of information, (2) a lack of sufficient savings to warrant delaying or altering purchases (*e.g.* an inefficient ventilation fan in a new building or the delayed replacement of a water pump), (3) inconsistent (*e.g.* excessive short-term) weighting of future energy cost savings relative to available returns on other investments, (4) computational or other difficulties associated with the evaluation of relevant tradeoffs, and (5) a divergence in incentives (*e.g.* renter versus owner; builder v. purchaser). Other literature indicates that with less than perfect foresight and a high degree of uncertainty about the future, consumers may tradeoff these types of investments at a higher than expected rate between current consumption and uncertain future energy cost savings. While DOE is not prepared at present to provide a fuller quantifiable framework for this discussion, DOE seeks comments on how to assess these possibilities.

1. Water Heaters

Table V.59 presents a summary of the impacts for each water heater TSL.

TABLE V.59—SUMMARY OF RESULTS FOR WATER HEATERS

Category	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6	TSL 7
National Energy Savings (quads).	1.26	1.88	2.28	2.60	3.74	10.44	16.85
3% discount rate	0.67	0.99	1.21	1.38	1.99	5.57	8.98
7% discount rate	0.32	0.47	0.58	0.66	0.96	2.71	0.32
NPV of Consumer Benefits (2008$ billion).							
3% discount rate	10.20	12.71	14.36	15.64	21.89	41.52	47.99
7% discount rate	3.69	4.20	4.53	4.79	6.64	8.43	2.75
Industry Impacts							
Gas-Fired and Electric Storage.							
Industry NPV (2008$ million).	(4)–(12)	(5)–(31)	(5)–(35)	(3)–(79)	(21)–(130)	(2)–(306)	63–(538)
Industry NPV (% change).	(0.5)–(1.5)	(0.6)–(3.6)	(0.6)–(4.2)	(0.4)–(9.4)	(2.5)–(15.4)	(0.2)–(36.3)	7.5-(63.8)
Oil-Fired Storage.							
Industry NPV (2008$ million).	(0.2)–(0.3)	(0.2)–(0.3)	(0.2)–(0.4)	(0.2)–(0.4)	(0.2)–(0.4)	(0.2)–(0.4)	(1.3)–(3.5)
Industry NPV (% change).	(1.9)–(3.9)	(1.8)–(3.6)	(2.0)–(4.3)	(2.0)–(4.3)	(2.0)–(4.3)	(2.0)–(4.3)	(14.8)–(39.9)
Gas-Fired Instantaneous.							
Industry NPV (2008$ million).	1.2–(1.8)	1.2–(1.8)	1.2–(1.8)	1.2–(1.8)	1.2–(1.8)	1.2–(1.8)	80.3–(65.9)
Industry NPV (% change).	0.2–(0.3)	0.2–(0.3)	0.2–(0.3)	0.2–(0.3)	0.2–(0.3)	0.2–(0.3)	13.3–(10.9)
Cumulative Emissions Reduction.							

TABLE V.59—SUMMARY OF RESULTS FOR WATER HEATERS—Continued

Category	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6	TSL 7
CO_2 (Mt)	88.7	137	147	154	217	346	965
NO_X (kt)	68.5	106	113	118	165	254	730
Hg (t)	0.11	0.16	0.19	0.20	0.60	2.18	4.43
Value of Cumulative Emissions Reduction (2008$ million)‡.							
CO_2—3% discount rate	480–5,285	741–8,151	794–8,732	833–9,166	1,162–12,787	1,824–20,066	5,132–56,447
CO_2—7% discount rate	211–2,317	325–3,575	348–3,832	366–4,024	492–5,409	749–8,235	2,134–23,476
NO_X—3% discount rate	16–163	24–252	26–269	27–282	37–377	54.1–556	159–1,632
NO_X—7% discount rate	7–76	11–118	12–126	13–132	16–168	23.0–236	69–710
Hg—3% discount rate	0.05–2.2	0.07–3.3	0.08–3.7	0.09–4.1	0.28–12.53	0.93–41.7	1.90–84.8
Hg—7% discount rate	0.03–1.2	0.04–1.8	0.05–2.1	0.05–2.2	0.16–6.94	0.49–21.7	0.99–44.1
Mean LCC Savings* (2008$).							
Gas-Fired Storage	69	68	68	68	78	68	(55)
Electric Storage	16	23	32	39	96	224	273
Oil-Fired Storage	171	288	395	395	395	395	655
Gas-Fired Instantaneous	0	0	0	0	0	0	(307)
Median PBP (years).							
Gas-Fired Storage	1.4	2.7	2.7	2.7	3.0	2.7	14.1
Electric Storage	2.8	3.0	4.5	5.8	5.9	8.3	8.2
Oil-Fired Storage	0.7	0.4	0.5	0.5	0.5	0.5	1.4
Gas-Fired Instantaneous.	23.5	23.5	23.5	23.5	23.5	23.5	39.5
Distribution of Consumer LCC Impacts							
Gas-Fired Storage.							
Net Cost (%)	9	15	15	15	16	15	62
No Impact (%)	22	17	17	17	16	17	1
Net Benefit (%)	69	68	68	68	68	68	36
Electric Storage.							
Net Cost (%)	10	11	20	25	25	45	45
No Impact (%)	32	29	14	10	10	5	1
Net Benefit (%)	59	60	66	65	65	50	54
Oil-Fired Storage.							
Net Cost (%)	0	0	0	0	0	0	0
No Impact (%)	69	52	45	45	45	45	7
Net Benefit (%)	31	48	55	55	55	55	93
Gas-Fired Instantaneous.							
Net Cost (%)	11	11	11	11	11	11	83
No Impact (%)	85	85	85	85	85	85	6
Net Benefit (%)	4	4	4	4	4	4	12
Generation Capacity Change (GW)†.	(0.129)	(0.195)	(0.221)	(0.242)	(0.956)	(2.59)	(5.28)
Employment Impacts							
Total Potential Changes in Domestic Production Workers in 2015.							
Gas-Fired and Electric Storage.	(3,690)–68	(3,690)–152	(3,690)–191	(3,690)–287	(3,690)–706	(3,690)–4,078	(3,690)–6,133
Oil-Fired Storage	(38)–(1)	(38)–2	(38)–(1)	(38)–(1)	(38)–(1)	(38)–(1)	(38)–9
Gas-Fired Instantaneous.	Not Applicable*.						
Indirect domestic jobs (thousands)†.	3.32	4.38	6.70	8.49	17.82	55.67	68.11

Note: Parentheses indicate negative (-) values.
* For LCCs, a negative value means an increase in LCC by the amount indicated.
** The industry for gas-fired instantaneous water heaters is international.
† Changes in 2044
‡ Range of the economic value of CO_2 reductions is based on estimates of the global benefit of reduced CO_2 emissions.

DOE first considered TSL 7, which represents the max-tech efficiency levels for all four product classes. TSL 7 would save 16.85 quads of energy, an amount DOE considers significant. TSL 7 would provide a NPV of consumer benefit of $2.75 billion, using a discount rate of 7 percent, and $48.0 billion, using a discount rate of 3 percent.

The cumulative emissions reductions at TSL 7 are 965 Mt of CO_2, 730 kt of NO_X, and 4.43 t of Hg. The estimated monetary value of the cumulative CO_2 emissions reductions at TSL 7 is $2.13 billion to $23.48 billion, using a discount rate of 7 percent, and $5.13 to $56.45 billion, using a discount rate of 3 percent. Total electricity generating capacity in 2044 is estimated to decrease by 5.28 gigawatts (GW) under TSL 7.

At TSL 7, DOE projects that the average LCC impact for consumers is a

loss of $55 for gas-fired storage water heaters, a gain of $273 for electric storage water heaters, a gain of $655 for oil-fired storage water heaters, and a loss of $307 for gas-fired instantaneous water heaters. The median payback period is 14.1 years for gas-fired storage water heaters, 8.2 years for electric storage water heaters, 1.4 years for oil-fired storage water heaters, and 39.5 years for gas-fired instantaneous water heaters (which is substantially longer than the mean lifetime of the product). At TSL 7, the fraction of consumers experiencing an LCC benefit is 36 percent for gas-fired storage water heaters, 54 percent for electric storage water heaters, 93 percent for oil-fired storage water heaters, and 12 percent for gas-fired instantaneous water heaters. The fraction of consumers experiencing an LCC cost is 62 percent for gas-fired storage water heaters, 45 percent for electric storage water heaters, 0 percent for oil-fired storage water heaters, and 83 percent for gas-fired instantaneous water heaters.

At TSL 7, the projected change in the INPV is estimated to decrease up to $538 million for gas-fired and electric storage water heaters, a decrease of up to $3.5 million for residential oil-fired storage water heaters, and a decrease of up to $66 million for gas-fired instantaneous water waters, in 2008$. For gas and electric storage water heaters, the impacts are driven primarily by the assumptions regarding the ability for manufacturers to produce products at these efficiency levels in the volumes necessary to serve the entire market. Manufacturers would need to redesign almost all of their products at TSL 7, which would force manufacturers to incur significant product and capital conversion costs. Some loss in product utility may also occur for units that are presently installed in space-constrained applications because condensing and heat pump technologies would typically cause water heaters to have a larger footprint. At TSL 7, DOE recognizes the risk of very large negative impacts if manufacturers' expectations about reduced profit margins are realized. In particular, if the high end of the range of impacts is reached as DOE expects, TSL 7 could result in a net loss of 63.8 percent in INPV for gas-fired and electric storage water heaters, a net loss of 39.9 percent in INPV for oil-fired storage water heaters, and a net loss of 10.9 percent in INPV for gas-fired instantaneous water heaters.

At TSL 7, the average LCC savings are lower for all of the considered consumer subgroups than for the full household sample for electric and gas-fired storage water heaters. In the case of electric storage water heaters, the multi-family subgroup would experience an average negative LCC savings of $357 (*i.e.,* the average LCC would increase), and three-fourths of the households would experience a net cost. For the other subgroups, the fraction of households that would experience a net cost is close to or just above 50 percent, which is slightly higher than for the full household sample. The impact on the multi-family subgroup is primarily due to the lower hot water use per family among these households.

For gas-fired storage water heaters at TSL 7, condensing operation would be required. DOE has several concerns related to the condensing gas-fired storage water heater market. At the time of the NOPR analysis, there were no condensing gas-fired storage water heaters available to residential consumers in the United States. DOE is concerned about the ability of manufacturers to convert all product lines to manufacture condensing gas-fired storage water heaters in the volumes needed by the compliance date of the standard, because the manufacturers' ability to afford the necessary conversion costs is uncertain. In addition, uncertainties exist about whether manufacturers will be able to train enough installers and servicers of condensing gas-fired water heaters to serve the relevant market by the compliance date of the standard. As with electric storage heat pump water heaters, DOE is concerned that a typical installer or repair person will not have the knowledge required to troubleshoot or repair condensing gas-fired storage water heaters since they are more complex than traditional gas-fired storage water heaters. It is unclear whether reliable installation and servicing could be achieved by the effective date for compliance with the standard.

TSL 7 also includes an efficiency level for electric storage water heaters that will require the use of heat pump technology. The substantial average savings for customers estimated by DOE's analysis for TSL 7 are primarily driven by the results for heat pump water heaters. However, DOE has concerns about issues with the current heat pump water heater market that may prevent heat pump technology from being ready for full scale implementation. DOE fully discusses these concerns and seeks comments from interested parties on a variety of issues associated with heat pump water heaters in its discussion of the benefits and burdens of TSL 6, below.

The Secretary tentatively concludes that at TSL 7, the benefits of energy savings, positive NPV of consumer benefits, generating capacity reductions, and emission reductions would be outweighed by the economic burden on a significant fraction of consumers due to the large increases in first costs associated with electric heat pump water heaters and gas-fired condensing water heaters, the disproportionate impacts to consumers in multi-family housing, the large capital conversion costs that could result in a large reduction in INPV for the manufacturers, as well as the uncertainty associated with providing products at the max-tech level on a scale necessary to serve the entire market. Consequently, the Secretary has tentatively concluded that TSL 7 is not economically justified.

Next, DOE considered TSL 6. The efficiency levels in TSL 6 include the ENERGY STAR program level for electric storage water heaters, which requires heat pump water heaters. TSL 6 would save 10.4 quads of energy, an amount DOE considers significant. TSL 6 would increase consumer NPV by $8.4 billion, using a discount rate of 7 percent, and increase the NPV by $41.5 billion, using a discount rate of 3 percent.

The cumulative emissions reductions at TSL 6 are 346 Mt of CO_2, 254 kt of NO_X, and 2.18 t of Hg. The estimated monetary value of the cumulative CO_2 emissions reductions at TSL 6 is $749 billion to $8.235 billion, using a discount rate of 7 percent, and $1.824 billion to $20.066 billion, using a discount rate of 3 percent. Total generating capacity in 2044 is estimated to decrease by 2.59 GW under TSL 6.

At TSL 6, DOE projects that the average LCC impact is a gain of $68 for gas-fired storage water heaters, a gain of $224 for electric storage water heaters, a gain of $395 for oil-fired storage water heaters, and no change for gas-fired instantaneous water heaters. The median payback period is 2.7 years for gas-fired storage water heaters, 8.3 years for electric storage water heaters, 0.5 years for oil-fired storage water heaters, and 23.5 years for gas-fired instantaneous water heaters (which is longer than the mean lifetime of the product). At TSL 6, the fraction of consumers experiencing an LCC benefit is 68 percent for gas-fired storage water heaters, 50 percent for electric storage water heaters, 55 percent for oil-fired storage water heaters, and 4 percent for gas-fired instantaneous water heaters. The fraction of consumers experiencing an LCC cost is 15 percent for gas-fired storage water heaters, 45 percent for

electric storage water heaters, 0 percent for oil-fired storage water heaters, and 11 percent for gas-fired instantaneous water heaters.

At TSL 6, the projected change in INPV ranges from a decrease of up to $305.8 million for gas-fired and electric storage water heaters, a decrease of up to $0.4 million for oil-fired storage water heaters, and a decrease of up to $1.8 million for gas-fired instantaneous water heaters, in 2008$. The negative impacts on INPV are driven largely by the required efficiencies for electric storage water heaters which effectively require heat pump technology. The oil-fired storage water heater and gas-fired instantaneous water heater efficiencies do not require substantial changes to the existing operations for some manufacturers. The significant changes for electric storage water heaters help to drive the INPVs negative, especially if profitability is impacted after the compliance date of the amended energy conservation standard. In particular, if the high end of the range of impacts is reached as DOE expects, TSL 6 could result in a net loss of 36.3 percent in INPV for gas-fired and electric storage water heaters, a net loss of 4.3 percent in INPV for oil-fired storage water heaters, and a net loss of 0.3 percent in INPV for gas-fired instantaneous water heaters.

TSL 6 includes efficiency levels for electric storage water heaters that are currently only achievable through the use of advanced heat pump technologies. DOE's analysis indicates that dramatic reductions in energy use and substantial economic savings are possible for electric water heaters with the use of these technologies. The average savings for electric water heater customers estimated by DOE's analysis for TSL 6 are primarily driven by the results for heat pump water heaters. While DOE finds the potential energy savings resulting from a national heat pump water heater standard very favorable, DOE has some concerns regarding the manufacturability and the market for heat pump water heaters, which are further discussed below.

Heat pump technologies are currently used in space heating and cooling, and other refrigeration-cycle products, indicating that this technology is a viable design option. The use of heat pump water heaters adds dramatically to the MSP estimates, increasing the MSP more than $400 over the baseline electric storage water heater. In part due to this change, the total installed cost to the consumer increases by an average of $900 for heat pump water heaters compared to traditional electric storage water heaters that use electric resistance heating elements. Even though there are potential benefits of adopting an amended energy conservation standard requiring heat pump technologies, DOE is concerned about the uncertainties currently experienced in the heat pump water heater market.

Although most manufacturers are in the process of developing a heat pump water heater to offer to consumers in response to the ENERGY STAR program or have recently began to offer a heat pump water heater model for sale, heat pump water heaters were not offered for sale at the time DOE's analysis was developed. DOE's shipments model projects that by 2015 heat pump water heaters will achieve approximately five percent market share. The manufacturer impacts are driven primarily by the assumptions regarding the ability of manufacturers to produce heat pump water heaters in the full range of rated storage volumes in the quantities necessary to serve the entire market. Though most electric storage water heater manufacturers indicated that they are in the process of developing heat pump water heaters, all manufacturers believe that an efficiency level that requires heat pump water heater technology is not appropriate as an amended energy conservation standard. Several manufacturers expect that they will have to buy the heat pump modules from outside vendors because most water heater manufacturers have no experience manufacturing heat pumps and have limited space in their facilities to produce heat pump systems. Manufacturers stated that they would consider moving all or part of their existing production capacity abroad if the energy conservation standard is set at TSL 6 because many manufacturers expect to have to redesign their facilities completely to accommodate a minimum energy conservation standard requiring heat pump water heaters. DOE is concerned about the capability of manufacturers to convert all product lines to manufacture heat pump water heaters in the volumes needed by the compliance date of the standard, because producing exclusively heat pump water heaters will require $119 million in conversion costs plus an additional $256 million in working capital for a $375 million cash requirement. In addition, water heater manufacturers would be dependent upon the ability of heat pump component manufacturers (*e.g.,* compressor manufacturers) to ramp up production to support the new market by the compliance date of the amended standard. DOE invites comments on the viability for high-volume production of heat pump water heaters in the full range of rated storage volumes and also requests information or data that would allow an assessment of such viability to be conducted. (See Issue 11 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

DOE also notes that the service industry has very little experience with integrated heat pump water heater designs because heat pump water heaters have only been available in the U.S. market in the past for short periods of time, and have only recently become available to the U.S. market once again. DOE is concerned that a typical installer or repair person would not have the requisite knowledge to troubleshoot or repair heat pump water heaters because they are more complex than traditional electric storage water heaters. It is unclear whether reliable installation and servicing could be achieved on the scale needed by the compliance date of the amended standard.

In addition, although DOE's analysis reveals that heat pump water heaters are capable of being installed in all of the types of installations currently serviced by the residential electric storage water heating market, DOE found that in certain situations (especially indoor locations) installations could be very costly for consumers, requiring them to alter their existing space to accommodate a heat pump water heater. DOE estimates 30 to 40 percent of installations would require such building modifications. In part for this reason, DOE estimated that 12 percent of electric storage water heater consumers would experience an increase of more than $500 in their LCC compared to the base case.

Another concern DOE has regarding heat pump water heaters is the impact on consumer utility in the instances when electric storage water heaters are installed in conditioned indoor spaces. DOE estimates that 39 percent of electric storage water heaters are installed in conditioned spaces. In these cases, the cold air given off by the heat pump module may negatively impact consumer comfort due to uneven heating and cooling.

DOE strongly considered TSL 6 as the proposed standard level for residential water heaters. DOE is concerned, however, about the ability for manufacturers to ramp up production in time to meet the demand by the compliance date of amended standards, the potential large increases in total installed cost to certain consumers, the ability for the service industry to gain the knowledge and experience necessary to provide reliable service to consumers, the potential impacts on

multi-family households, and the potential impacts on the space conditioning of the residence. DOE seeks comments and data from interested parties that will allow DOE to further bring clarity to the issues surrounding heat pump water heaters, and determine how the issues discussed in the paragraphs above could be adequately addressed prior to the compliance date of an amended national energy conservation standard for water heaters that would effectively require the use of such technology. (See Issue 16 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.) For today's proposed rule, the Secretary tentatively concludes that at TSL 6, the benefits of energy savings, generating capacity reductions, and emission reductions would be outweighed by the negative economic impacts on those consumers that would have to make structural changes to accommodate the larger footprint of the heat pump water heaters, the economic burden on a large fraction of consumers due to the large increases in first costs associated with heat pump water heaters, the disproportionate impacts to consumers in multi-family housing and others with comparatively low usage rates, the large capital conversion costs that could result in a large reduction in INPV for the manufacturers, and the uncertainties associated with the heat pump water heater market. DOE is particularly concerned about product availability for the heat pump water heater market since it is unclear whether manufacturers would be able to produce equipment in the volumes necessary to serve the entire market. DOE will revisit this decision and strongly reconsider adoption of TSL 6 in the final rule in light of any comments and data submitted by interested parties.

Next, DOE considered TSL 5, in which DOE paired efficiency levels that would effectively require different technologies for large-volume and small-volume gas-fired and electric storage water heaters in an effort to promote advance technology penetration into the market and potentially save additional energy. Specifically, TSL 5 would effectively require heat pump technology for electric storage water heaters greater than 55 gallons and condensing technology for gas-fired storage water heaters greater than 55 gallons.

TSL 5 would save 3.7 quads of energy, an amount DOE considers significant. Under TSL 5, the NPV of consumer benefit would be $6.64 billion, using a discount rate of 7 percent, and $21.89 billion, using a discount rate of 3 percent.

The cumulative emissions reductions at TSL 5 are 217 Mt of CO_2, 165 kt of NO_X, and 0.60 t of Hg. The estimated monetary value of the cumulative CO_2 emissions reductions at TSL 5 is $0.492 to $5.409 billion, using a discount rate of 7 percent, and $1.162 to $12.787 billion, using a discount rate of 3 percent. Total generating capacity in 2044 is estimated to decrease by 0.96 GW under TSL 5.

At TSL 5, DOE projects that the average LCC impact is a gain (consumer cost savings) of $78 for gas-fired storage water heaters, a gain of $96 for electric storage water heaters, a gain of $395 for oil-fired storage water heaters, and no change for gas-fired instantaneous water heaters. The median payback period is 3.0 years for gas-fired storage water heaters, 5.9 years for electric storage water heaters, 0.5 years for oil-fired storage water heaters, and 23.5 years for gas-fired instantaneous water heaters (which is longer than the mean lifetime of the product). At TSL 5, the fraction of consumers experiencing an LCC benefit is 68 percent for gas-fired storage water heaters, 65 percent for electric storage water heaters, 55 percent for oil-fired storage water heaters, and 4 percent for gas-fired instantaneous water heaters. The fraction of consumers experiencing an LCC cost is 16 percent for gas-fired storage water heaters, 25 percent for electric storage water heaters, 0 percent for oil-fired storage water heaters, and 11 percent for gas-fired instantaneous water heaters.

At TSL 5, the projected change in INPV ranges from a decrease of up to $129.9 million for gas-fired and electric storage water heaters, a decrease of up to $0.4 million for oil-fired storage water heaters, and a decrease of up to $1.8 million for gas-fired instantaneous water heaters, in 2008$. The negative impacts on INPV are driven largely by the required efficiencies for gas-fired and electric storage water heaters with rated storage volumes above 55 gallons. TSL 5 would effectively require heat pump technology and condensing technology for the electric and gas-fired storage water heaters at these volume sizes. The efficiency requirements at TSL 5 for electric storage water heater with a rated volume less than 55 also result in negative impacts because such large increases in insulation also require manufacturers to implement changes to their existing equipment. The oil-fired storage water heater and gas-fired instantaneous water heater efficiencies at TSL 5 do not require substantial changes to the existing operations for some manufacturers. The significant changes gas-fired and electric storage water heaters with rated storage volumes greater than 55 gallons help to drive the INPVs negative, especially if profitability is impacted after the compliance date of the amended energy conservation standard. In particular, if the high end of the range of impacts is reached as DOE expects, TSL 5 could result in a net loss of 15.4 percent in INPV for gas-fired and electric storage water heaters, a net loss of 4.3 percent in INPV for oil-fired storage water heaters, and a net loss of 0.3 percent in INPV for gas-fired instantaneous water heaters.

DOE believes TSL 5 would provide an effective mechanism for increasing the market penetration for advanced-technology water heaters. Given DOE's concerns with TSL 6 (which includes a national heat pump water heater standard for electric storage water heaters across the entire range of rated storage volumes) as described above, DOE also strongly considered proposing TSL 5. TSL 5 results in positive NPV of consumer benefit for both electric and gas-fired storage water heaters, while also providing additional energy and carbon savings.

Using DOE's shipments model and market assessment, DOE estimated approximately 4 percent of gas-fired storage water heater shipments and 11 percent of models would fall into the large-volume water heater category using the TSL 5 division (*i.e.,* large water heaters with storage volumes above 55 gallons). Similarly, DOE estimated approximately 9 percent of electric storage water heater shipments and 27 percent of models would fall into the large-volume water heater category using the TSL 5 division. Compared to TSL 6, TSL 5 effectively requires heat pump technology for a relatively small fraction of the electric storage water heater market, reduces the number of installations that would necessitate significant building modifications due to the size of heat pump water heaters, reduces the number of installations that have space conditioning impacts from cool air produced by the heat pump water heater operation, results in higher average savings and lower median payback periods, and reduces the negative impacts on consumer subgroups. For gas-fired storage water heaters, compared to a national condensing standard level (TSL 7), TSL 5 requires condensing technology for a relatively small fraction of the gas storage water heater market, reduces the number of installations that require significant building modifications due to the size of condensing gas water heaters, and

results in higher average LCC savings and lower median payback period.

Even though DOE has identified a number of benefits associated with TSL 5, DOE is aware that there are multiple issues associated with promulgating an amended energy conservation standard that affects only a subset of the products on the market. Potential issues with TSL 5 affecting both heat pump water heaters and condensing gas-fired water heaters include: (1) Consumer acceptance; (2) training; (3) product substitution; (4) engineering resource constraints; (5) product discontinuation; and (6) manufacturing issues.

First, consumers may elect not to buy the larger volume water heaters for a number of reasons, including increased first cost, being unfamiliar with the advanced technologies being used, and installation size constraints. Both heat pump and condensing water heaters are significantly more expensive than baseline water heaters of the same nominal capacity and take up more space per nominal gallon of capacity. As a result, consumers may buy multiple water heaters that are under the capacity limit and use them in parallel to achieve the same nominal capacity, although at a higher standby loss.

Furthermore, the current water heater service and installation infrastructure has little to no experience installing and servicing these advanced-technology storage water heaters, leading to possible reluctance of contractors to install these products. To minimize unit damage and warranty claims and to improve market acceptance, manufacturers would likely have to expend significant additional resources to hire training staff to tour the country and to provide technical support at headquarters. Additionally, field technicians likely would need additional licenses and test equipment to be able to service heat pump water heaters properly (for example, to recover refrigerant). These additional requirements would likely increase installation and service costs beyond current levels, since consumers will have fewer servicers/installers to choose from and the products have become more complex.

Due to the price discrepancy between the cost of commercial equipment (not covered by the heat pump and condensing requirement) and residential products of the same capacity, the use of commercially-classified storage water heater equipment in residential applications would likely significantly expand beyond current levels under TSL 5. Such substitutions have health and safety considerations such as the typical lack of FVIR protection and the higher allowable set-point temperatures for commercial equipment.

Manufacturers would likely face constraints regarding the abilities of their engineering teams to develop multiple water heater families, as most engineering departments have limited experience with either advanced technology. At a minimum, condensing gas-fired products would require manufacturers to convert existing commercial equipment lines to residential use. However, multiple manufacturers are expected to have to develop completely new platforms in order to remain cost-competitive.

In light of the above, manufacturers could decide that the demand for residential heat pump and condensing gas water heaters would likely drop to a point where product conversion and capital costs required to modify their operations are not justified. As a result, some manufacturers would likely no longer manufacture residential storage water heaters at rated storage volumes above the division point (*i.e.,* 56 gallons and above). Even if a manufacturer were to offer products, development and capital costs make it likely that consumers would have fewer product families to choose from than presently exist. Mass-manufacturing facilities visited by DOE were typically fine-tuned for units with similar assembly processes and cannot accommodate units with a wide scope of assembly requirements. Units that fall outside these standardized (high-volume) production settings would likely have to be assembled on a separate line in a new facility adjacent to current manufacturing space. The costs to retrofit a manufacturing plant to allow production of these units are high and the industry reaction is uncertain. DOE seeks comments about whether manufacturers would upgrade just one of their facilities (and produce all heat pump and/or condensing units there) or would upgrade multiple facilities to minimize shipping costs and distribution costs. Additionally, manufacturers could continue the trend to relocate to new facilities or expand existing facilities abroad.

DOE strongly considered TSL 5 and believes it would provide additional energy and carbon savings, while mitigating some of the issues associated with a national heat pump water heater standard. However, DOE has identified a number of potential issues with TSL 5 related to proposing standards that effectively require different technologies for different subsets of products. For today's proposed rule, the Secretary tentatively concludes that at TSL 5, the benefits of energy savings, generating capacity reductions, economic savings for most consumers, and the emission reductions would be outweighed by the large capital conversion costs that could result in a large reduction in INPV for the manufacturers, the uncertainties associated with the rapid introduction of new product technologies, the large increases in first costs, especially for those consumers that would have to make structural changes, and the uncertainties associated with a promulgation of an amended energy conservation standards that only affects a subset of the market. DOE seeks comments and data from interested parties that will assist DOE in bringing further clarity to some of the issues surrounding the product division used in the two slope energy-efficiency equations, promulgation of different standards for a subset of products, the heat pump water heater market, the condensing water heater market, as well as help DOE determine how these issues can be adequately addressed prior to the compliance date of an amended energy conservation standard for residential water heaters. (See Issue 17 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.) DOE will revisit this decision and strongly consider adoption of TSL 5 in the final rule in light of any comments and data submitted by interested parties.

Next, DOE considered TSL 4. TSL 4 would save 2.6 quads of energy, an amount DOE considers significant. Under TSL 4, the NPV of consumer benefit would be $4.8 billion, using a discount rate of 7 percent, and $15.6 billion, using a discount rate of 3 percent.

The cumulative emissions reductions at TSL 4 are 154 Mt of CO_2, 118 kt of NO_X, and 0.2 t of Hg. The estimated monetary value of the cumulative CO_2 emissions reductions at TSL 4 is $0.366 to $4.024 billion, using a discount rate of 7 percent, and $0.833 to $9.166 billion, using a discount rate of 3 percent. Total generating capacity in 2044 is estimated to decrease by 0.24 GW under TSL 4.

At TSL 4, DOE projects that the average LCC impact is a gain of $68 for gas-fired storage water heaters, a gain of $39 for electric storage water heaters, a gain of $395 for oil-fired storage water heaters, and no change for gas-fired instantaneous water heaters. The median payback period is 2.7 years for gas-fired storage water heaters, 5.8 years for electric storage water heaters, 0.5 years for oil-fired storage water heaters, and 23.5 years for gas-fired instantaneous water heaters (which is longer than the mean lifetime of the product). At TSL 4, the fraction of

consumers experiencing an LCC benefit is 68 percent for gas-fired storage water heaters, 65 percent for electric storage water heaters, 55 percent for oil-fired storage water heaters, and 4 percent for gas-fired instantaneous water heaters. The fraction of consumers experiencing an LCC cost is 15 percent for gas-fired storage water heaters, 25 percent for electric storage water heaters, 0 percent for oil-fired storage water heaters, and 11 percent for gas-fired instantaneous water heaters. For gas-fired instantaneous water heaters, 85 percent of consumers would not be impacted at TSL 4 because DOE projects that they would purchase an appliance of equal or higher efficiency than the TSL 4 level.

At TSL 4, the projected change in INPV ranges from a decrease of up to $79 million for gas-fired and electric storage water heaters, a decrease of up to $0.4 million for oil-fired storage water heaters, and a decrease of up to $1.8 million for gas-fired instantaneous water heaters, in 2008$. The impacts on manufacturers are less significant at TSL4 because the technology used at TSL 4 does not greatly differ from baseline models for gas-fired, electric, and oil-fired storage water heaters. In addition, most manufacturers of gas-fired instantaneous water heaters offer products that meet or exceed the efficiencies required at TSL 4. If the high end of the range of impacts is reached as DOE expects, TSL 4 could result in a net loss of 9.4 percent in INPV for gas-fired and electric storage water heaters, a net loss of 4.3 percent in INPV for oil-fired storage water heaters, and a net loss of 0.3 percent in INPV for gas-fired instantaneous water heaters.

After considering the analysis, comments on the January 13, 2009, notice and the preliminary TSD, and the benefits and burdens of TSL 4, the Secretary tentatively concludes that this TSL will offer the maximum improvement in efficiency that is technologically feasible and economically justified, and will result in significant conservation of energy. Further, benefits from carbon dioxide reductions (at a central value of $20) would increase NPV by between $366 million and $4,024 million (2008$) at a 7% discount rate and between $833 million and $9,166 million at a 3% discount rate. These benefits from carbon dioxide emission reductions, when considered in conjunction with the consumer savings NPV and other factors described above support DOE's tentative conclusion that trial standard level 4 is economically justified. Therefore, the Department today proposes to adopt TSL 4 as amended energy conservation standards for water heaters as shown in Table V.60.

TABLE V.60—PROPOSED MINIMUM ENERGY FACTOR REQUIREMENTS FOR RESIDENTIAL WATER HEATERS (TSL 4)

Product class	Energy factor requirement	
Gas-fired Storage	For tanks with a Rated Storage Volume at or below 60 gallons:. EF = 0.675 − (0.0012 × Rated Storage Volume in gallons).	For tanks with a Rated Storage Volume above 60 gallons: EF = 0.717 −(0.0019 × Rated Storage Volume in gallons)
Electric Storage	For tanks with a Rated Storage Volume at or below 80 gallons:. EF = 0.96 − (.0003 × Rated Storage Volume in gallons).	For tanks with a Rated Storage Volume above 80 gallons: EF = 1.088 − (.0019 × Rated Storage Volume in gallons)
Oil-fired Storage	EF = 0.68 − (.0019 × Rated Storage Volume in gallons)	
Gas-fired Instantaneous	EF = 0.82 − (.0019 × Rated Storage Volume in gallons)	

DOE also calculated the annualized values for certain benefits and costs under the considered TSLs. The annualized values refer to consumer operating cost savings, consumer incremental product and installation costs, the quantity of emissions reductions for CO_2, NO_X, and Hg, and the monetary value of CO_2 emissions reductions (using a value of $20/t CO_2, which is in the middle of the values considered by DOE for valuing the potential global benefits resulting from reduced CO_2 emissions).

DOE used a two-step calculation process to convert the time-series of costs and benefits into annualized values. First, DOE calculated a present value for the time-series of costs and benefits using a discount rate of either three or seven percent. From the present value, DOE then calculated the fixed annual payment over the analysis time period (2015 to 2045 for water heaters) that yielded the same present value. The fixed annual payment is the annualized value. Although DOE calculated annualized values, this does not imply that the time-series of cost and benefits from which the annualized values were determined are a steady stream of payments.

Table V.61 presents the annualized values for each TSL considered for water heaters. The tables also present the annualized net benefit that results from summing the two monetary benefits and subtracting the consumer incremental product and installation costs. Although summing the value of operating savings with the value of CO_2 reductions provides a valuable perspective, please note the following. The operating cost savings are domestic U.S. consumer monetary savings found in market transactions while the CO_2 value is based on an estimate of imputed marginal SCC, which is meant to reflect the global benefits of CO_2 reductions. In addition, the SCC value considers a longer time frame than the period considered for operating cost savings.

TABLE V.61—ANNUALIZED BENEFITS AND COSTS FOR WATER HEATERS BY TRIAL STANDARD LEVEL

TSL	Category	Unit	Primary estimate (AEO reference case)		Low estimate (AEO low growth case)		High estimate (high growth case)	
			7%	3%	7%	3%	7%	3%
	Benefits							

TABLE V.61—ANNUALIZED BENEFITS AND COSTS FOR WATER HEATERS BY TRIAL STANDARD LEVEL—Continued

TSL	Category	Unit	Primary estimate (AEO reference case)		Low estimate (AEO low growth case)		High estimate (high growth case)	
			7%	3%	7%	3%	7%	3%
1	Monetized Operating Cost Savings.	Million 2008$	709.5	885.3	663.7	824.2	755.3	946.6
	Quantified Emissions Reductions.	CO_2 (Mt)	2.63	2.83	3.04	3.01	0.52	0.77
		NO_X (kt)	2.04	2.19	2.38	2.35	0.47	0.67
		Hg (t)	0.005	0.004	(0.002)	(0.006)	0.005	0.007
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	90.4	108.0	105.1	126.5	17.6	30.8
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	292.9	282.3	277.2	265.3	308.7	299.4
	Net Benefits							
	Monetized Value	Million 2008$	507.0	711.0	491.6	685.4	464.3	677.9
2	Benefits							
	Monetized Operating Cost Savings.	Million 2008$	1,051.1	1,309.8	984.4	1,220.4	1,117.9	1,399.4
	Quantified Emissions Reductions.	CO_2 (Mt)	4.07	4.37	4.68	4.63	0.85	1.24
		NO_X (kt)	3.16	3.38	3.66	3.61	0.77	1.07
		Hg (t)	0.007	0.006	(0.003)	(0.009)	0.008	0.011
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	139.6	166.5	161.9	194.6	28.9	49.2
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	576.2	557.9	545.2	524.1	607.5	591.9
	Net Benefits							
	Monetized Value	Million 2008$	614.5	918.5	601.1	890.8	539.4	856.8
3	Benefits							
	Monetized Operating Cost Savings.	Million 2008$	1,297.3	1,610.6	1,210.0	1,496.1	1,384.7	1,725.0
	Quantified Emissions Reductions.	CO_2 (Mt)	4.36	4.68	5.05	5.00	0.72	1.13
		NO_X (kt)	3.38	3.62	3.95	3.90	0.67	0.99
		Hg (t)	0.008	0.007	(0.003)	(0.010)	0.009	0.012
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	149.6	178.4	175.0	210.3	24.1	45.2
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	785.3	761.4	742.9	715.3	828.0	807.9
	Net Benefits							
	Monetized Value	Million 2008$	661.7	1,027.7	642.0	991.2	580.8	962.4
4	Benefits							
	Monetized Operating Cost Savings.	Million 2008$	1,487.1	1,842.4	1,383.7	1,708.4	1,590.5	1,976.2
	Quantified Emissions Reductions.	CO_2 (Mt)	4.58	4.92	5.34	5.28	0.61	1.04
		NO_X (kt)	3.54	3.79	4.17	4.11	0.58	0.92
		Hg (t)	0.009	0.008	(0.003)	(0.011)	0.010	0.013
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	157.1	187.3	184.8	222.1	20.2	41.9

TABLE V.61—ANNUALIZED BENEFITS AND COSTS FOR WATER HEATERS BY TRIAL STANDARD LEVEL—Continued

TSL	Category	Unit	Primary estimate (AEO reference case)		Low estimate (AEO low growth case)		High estimate (high growth case)	
			7%	3%	7%	3%	7%	3%
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	945.5	917.3	894.4	861.7	997.0	973.4
	Net Benefits							
	Monetized Value	Million 2008$	698.8	1,112.4	674.1	1,068.9	613.7	1,044.7
5	Benefits							
	Monetized Operating Cost Savings.	Million 2008$	2,163.1	2,670.6	2,005.0	2,469.3	2,320.8	2,871.2
	Quantified Emissions Reductions.	CO_2 (Mt)	6.18	6.83	14.38	14.84	3.11	3.56
		NO_X (kt)	4.72	5.20	11.09	11.41	2.43	2.78
		Hg (t)	0.023	0.022	0.038	0.030	0.011	0.017
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	211.2	261.2	318.5	383.1	26.2	52.1
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	1,413.1	1,376.1	1,336.7	1,292.6	1,490.2	1,460.4
	Net Benefits							
	Monetized Value	Million 2008$	961.2	1555.7	668.3	1176.7	830.6	1410.8
6	Benefits							
	Monetized Operating Cost Savings.	Million 2008$	6,331.1	7,745.0	5,801.0	7,097.1	6,857.9	8,387.1
	Quantified Emissions Reductions.	CO_2 (Mt)	9.49	10.72	15.61	16.89	(2.13)	(1.50)
		NO_X (kt)	7.02	7.90	11.90	12.82	(1.58)	(1.08)
		Hg (t)	0.077	0.075	0.038	0.036	0.004	0.012
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	321.6	410.0	537.9	646.5	(86.7)	(62.2)
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	5,405.0	5,315.6	5,112.0	4,992.4	5,700.5	5,641.7
	Net Benefits							
	Monetized Value	Million 2008$	1,247.7	2,839.3	689.0	2,104.7	1,157.4	2,745.4
7	Benefits							
	Monetized Operating Cost Savings.	Million 2008$	9,837.9	12,187.1	9,105.6	11,255.5	10,568.4	13,115.0
	Quantified Emissions Reductions.	CO_2 (Mt)	26.82	30.05	39.27	39.00	3.17	5.19
		NO_X (kt)	20.41	22.79	30.34	29.99	2.91	4.51
		Hg (t)	0.157	0.153	0.078	0.056	0.007	0.024
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	916.6	1,153.3	1,357.0	1,634.6	85.6	192.1
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	9,527.4	9,348.7	9,010.5	8,779.1	10,048.9	9,923.2

TABLE V.61—ANNUALIZED BENEFITS AND COSTS FOR WATER HEATERS BY TRIAL STANDARD LEVEL—Continued

TSL	Category	Unit	Primary estimate (AEO reference case)		Low estimate (AEO low growth case)		High estimate (high growth case)	
			7%	3%	7%	3%	7%	3%
	Net Benefits							
	Monetized Value	Million 2008$	1,227.2	3,991.8	1,452.1	4,110.9	605.1	3,383.9

2. Direct Heating Equipment

Table V.62 presents a summary of the impacts for each TSL considered for DHE.

TABLE V.62—SUMMARY OF RESULTS FOR DIRECT HEATING EQUIPMENT

Category	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6
National Energy Savings (quads)	0.15	0.17	0.22	0.39	0.44	1.08
3% discount rate	0.09	0.10	0.12	0.22	0.24	0.61
7% discount rate	0.04	0.05	0.06	0.11	0.12	0.31
NPV of Consumer Benefits (2008$ billion):						
3% discount rate	1.68	1.87	2.22	(0.33)	(0.26)	(2.63)
7% discount rate	0.71	0.79	0.91	(0.89)	(0.93)	(3.54)
Industry Impacts:						
Traditional Direct Heating Equipment:						
Industry NPV (2008$ million)	(0.4)–(1.6)	(0.6)–(3.1)	(1.1)–(6.0)	(1.3)–(7.6)	(1.8)–(8.0)	(2.2)–(10.8)
Industry NPV (% change)	(2.3)–(9.1)	(3.4)–(17.2)	(5.9)–(33.5)	(7.2)–(42.1)	(10.0)–(44.8)	(12.3)–(60.0)
Gas Hearth Direct Heating Equipment:						
Industry NPV (2008$ million)	(0.2)–(0.9)	(0.2)–(0.9)	(0.2)–(0.9)	2.4–(14.8)	2.4–(14.8)	10.2–(55.1)
Industry NPV (% change)	(0.2)–(1.1)	(0.2)–(1.1)	(0.2)–(1.1)	2.8–(17.1)	2.8–(17.1)	11.8–(63.8)
Cumulative Emissions Reduction*:						
CO_2 (Mt)	6.3	7.0	8.5	16.7	18.5	43.0
NO_X (kt)	5.8	6.4	7.7	15.2	16.9	39.6
Value of Cumulative Emissions Reduction (2008$ million)‡:						
CO_2—3% discount rate	34.3–377	38.1–419	46.2–508	90.5–996	100–1,101	233–2,564
CO_2—7% discount rate	16.2–178	18.0–198	21.8–240	42.9–472	47.4–521	111–1,216
NO_X—3% discount rate	1.4–14.5	1.6–16.1	1.9–19.4	3.7–38.3	4.1–42.5	9.7–99.4
NO_X—7% discount rate	0.7–7.3	0.8–8.0	0.9–9.7	1.9–19.2	2.1–21.3	4.9–50.0
Mean LCC Savings** (2008$):						
Gas Wall Fan	73	90	104	135	73	135
Gas Wall Gravity	25	83	192	192	68	68
Gas Floor	13	13	13	13	13	13
Gas Room	42	96	143	143	646	646
Gas Hearth	96	96	96	(70)	(70)	(253)
Median PBP (years):						
Gas Wall Fan	3.1	3.9	6.0	9.8	3.1	9.8
Gas Wall Gravity	8.1	6.5	8.3	8.3	13.0	13.0
Gas Floor	14.7	14.7	14.7	14.7	14.7	14.7
Gas Room	8.1	4.9	5.3	5.3	7.0	7.0
Gas Hearth	0.0	0.0	0.0	25.9	25.9	37.5
Distribution of Consumer LCC Impacts						
Gas Wall Fan:						
Net Cost (%)	3	5	30	44	3	44
No Impact (%)	59	55	14	5	59	5
Net Benefit (%)	38	41	56	52	38	52
Gas Wall Gravity:						
Net Cost (%)	12	19	39	39	59	59
No Impact (%)	70	40	0	0	0	0
Net Benefit (%)	18	41	61	61	41	41
Gas Floor:						
Net Cost (%)	25	25	25	25	25	25
No Impact (%)	57	57	57	57	57	57
Net Benefit (%)	18	18	18	18	18	18
Gas Room:						
Net Cost (%)	19	19	20	20	26	26
No Impact (%)	50	25	25	25	25	25
Net Benefit (%)	31	56	55	55	49	49

TABLE V.62—SUMMARY OF RESULTS FOR DIRECT HEATING EQUIPMENT—Continued

Category	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6
Gas Hearth:						
Net Cost (%)	9	9	9	69	69	81
No Impact (%)	51	51	51	13	13	0
Net Benefit (%)	40	40	40	17	17	19
Generation Capacity Change (GW)***	+0.023	+0.025	+0.031	+0.045	+0.049	+0.119
Employment Impacts:						
Total Potential Changes in Domestic Production Workers in 2013:						
Traditional Direct Heating Equipment	(300)–5	(300)–30	(300)–44	(300)–50	(300)–48	(300)–61
Gas Hearth Direct Heating Equipment	(1,243)–7	(1,243)–7	(1,243)–7	(1,243)–516	(1,243)–516	(1,243)–846
Indirect domestic jobs (thousands)***	0.16	0.18	0.23	0.08	0.09	0.24

Parentheses indicate negative (−) values.
* Hg emissions increase slightly (0.01 to 0.02 t) for the considered TSLs.
** For LCCs, a negative value means an increase in LCC by the amount indicated.
*** Changes in 2042.
‡ Range of the economic value of CO_2 reductions is based on estimates of the global benefit of reduced CO_2 emissions.

DOE first considered TSL 6, the max-tech level. TSL 6 would save 1.08 quads of energy, an amount DOE considers significant. TSL 6 would decrease consumer NPV by $3.54 billion, using a discount rate of 7 percent, and by $2.63 billion, using a discount rate of 3 percent.

The emissions reductions at TSL 6 are 43.0 Mt of CO_2 and 39.6 kt of NO_X. The estimated monetary value of the cumulative CO_2 emissions reductions at TSL 6 is $111 to $1,216 million, using a discount rate of 7 percent, and $233 to $2,564 million, using a discount rate of 3 percent. Total generating capacity in 2044 is estimated to increase slightly under TSL 6.

At TSL 6, DOE projects that the average LCC impact for consumers is a gain of $135 for gas wall fan DHE, $68 for gas wall gravity DHE, $13 for gas floor DHE, $646 for gas room DHE and a loss of $253 for gas hearth DHE. The median payback period is 9.8 years for gas wall fan DHE, 13.0 years for gas wall gravity DHE, 14.7 years for gas floor DHE, 7.0 years for gas room DHE and 37.5 for gas hearth DHE (which is significantly longer than the mean lifetime of the product). At TSL 6, the fraction of consumers experiencing an LCC benefit is 52 percent for gas wall fan DHE, 41 percent for gas wall gravity DHE, 18 percent for gas floor DHE, 49 percent for gas room DHE and 19 percent for gas hearth DHE. The fraction of consumers experiencing an LCC cost is 44 percent for gas wall fan DHE, 59 percent for gas wall gravity DHE, 25 percent for gas floor DHE, 26 percent for gas room DHE and 81 percent for gas hearth DHE.

At TSL 6, the projected change in INPV ranges from a decrease of up to $10.8 million for traditional DHE and a decrease of up to $55.1 million for gas hearth DHE, in 2008$. Very few manufacturers offer products at the max-tech level for both traditional and gas hearth DHE. At TSL 6, almost every manufacturer would face substantial product and capital conversion costs to completely redesign most of their current products and existing production facilities. In addition, higher component costs could significantly harm profitability. If the high end of the range of impacts is reached as DOE expects, TSL 6 could result in a net loss of 60.0 percent in INPV for traditional DHE and a net loss of 63.8 percent in INPV for gas hearth DHE. In addition to the large, negative impacts on INPV at TSL 6, the required capital and product conversion costs could cause material harm to a significant number of small businesses in both the traditional and gas hearth DHE market. The conversion costs could cause many of these small businesses to exit the market.

The Secretary tentatively concludes that at TSL 6, the benefits of energy savings, generating capacity reductions, and emission reductions would be outweighed by the negative impacts on consumer NPV, the economic burden on some consumers, the large capital conversion costs that could result in a large reduction in INPV for the manufacturers, and the potential impacts on a significant number of small businesses. Consequently, the Secretary has tentatively concluded that TSL 6 is not economically justified.

Next, DOE considered TSL 5. TSL 5 would save 0.44 quads of energy, an amount DOE considers significant. TSL 5 would decrease consumer NPV by $0.93 billion, using a discount rate of 7 percent, and by $0.26 billion, using a discount rate of 3 percent.

The emissions reductions at TSL 5 are 18.5 Mt of CO_2 and 16.9 kt of NO_X. The estimated monetary value of the cumulative CO_2 emissions reductions at TSL 5 is $47.4 to $521 million, using a discount rate of 7 percent, and $100 to $1,101 million, using a discount rate of 3 percent. Total generating capacity in 2044 is estimated to increase slightly under TSL 5.

At TSL 5, DOE projects that the average LCC impact for consumers is a gain of $73 for gas wall fan DHE, $68 for gas wall gravity DHE, $13 for gas floor DHE, $646 for gas room DHE and a loss of $70 for gas hearth DHE. The median payback period is 3.1 years for gas wall fan DHE, 13.0 years for gas wall gravity DHE, 14.7 years for gas floor DHE, 7.0 years for gas room DHE, and 25.9 for gas hearth DHE. At TSL 5, the fraction of consumers experiencing an LCC benefit is 38 percent for gas wall fan DHE, 41 percent for gas wall gravity DHE, 18 percent for gas floor DHE, 49 percent for gas room DHE, and 17 percent for gas hearth DHE. The fraction of consumers experiencing an LCC cost is 3 percent for gas wall fan DHE, 59 percent for gas wall gravity DHE, 25 percent for gas floor DHE, 26 percent for gas room DHE, and 69 percent for gas room DHE.

At TSL 5, the projected change in INPV ranges from a decrease of up to $8 million for traditional DHE and a decrease of up to $15 million for gas hearth DHE, in 2008$. While some manufacturers offer a limited number of products at TSL 5, most of the current products would have to be redesigned to meet the required efficiencies at TSL 5. In addition, higher component costs for both traditional and gas hearth DHE could significantly harm profitability. If the high end of the range of impacts is reached as DOE expects, TSL 5 could

result in a net loss of 44.8 percent in INPV for traditional DHE and a net loss of 17.1 percent in INPV for gas hearth DHE. In addition to the large, negative impacts on INPV at TSL 5, the required capital and product conversion costs could cause material harm to a significant number of small businesses in both the traditional and gas hearth DHE market. These manufacturers could be forced to discontinue many of their existing product lines and, possibly, exit the market altogether.

The Secretary tentatively concludes that at trial standard level 5, the benefits of energy savings, generating capacity reductions, and emission reductions would be outweighed by the negative impacts on consumer NPV, the economic burden on some consumers, the large capital conversion costs that could result in a large reduction in INPV for the manufacturers, and the potential for small businesses to have to reduce or discontinue a significant number of their product lines. Consequently, the Secretary has tentatively concluded that trial standard level 5 is not economically justified.

Next, DOE considered TSL 4. TSL 4 would save 0.39 quads of energy, an amount DOE considers significant. TSL 4 would provide a NPV of consumer benefit of $0.89 billion, using a discount rate of 7 percent, and $0.33 billion, using a discount rate of 3 percent.

The emissions reductions at TSL 4 are 16.7 Mt of CO_2 and 15.2 kt of NO_X. The estimated monetary value of the cumulative CO_2 emissions reductions at TSL 4 is $42.9 to $472 million, using a discount rate of 7 percent, and $90.5 to $996 million, using a discount rate of 3 percent. Total generating capacity in 2044 is estimated to increase slightly under TSL 4.

At TSL 4, DOE projects that the average LCC impact for consumers is a gain of $73 for gas wall fan DHE, $68 for gas wall gravity DHE, $13 for gas floor DHE, $646 for gas room DHE, and a loss of $70 for gas hearth DHE. The median payback period is 9.8 years for gas wall fan DHE, 8.3 years for gas wall gravity DHE, 14.7 years for gas floor DHE, 5.3 years for gas room DHE and 25.9 years for gas hearth DHE (which is significantly beyond the mean lifetime of the equipment). At TSL 4, the fraction of consumers experiencing an LCC benefit is 52 percent for gas wall fan DHE, 61 percent for gas wall gravity DHE, 18 percent for gas floor DHE, 55 percent for gas room DHE, and 17 percent for gas hearth DHE. The fraction of consumers experiencing an LCC cost is 44 percent for gas wall fan DHE, 39 percent for gas wall gravity DHE, 25 percent for gas floor DHE, 20 percent for gas room DHE and 69 percent for gas hearth DHE.

At TSL 4, the projected change in INPV ranges from a decrease of up to $8 million for traditional DHE and decrease of up to $15 million for gas hearth DHE. While some manufacturers offer a limited number of products at TSL 4, most of the current products would have to be redesigned to meet the required efficiencies at TSL 4. In addition, higher component costs for both traditional and gas hearth DHE could significantly harm profitability. If the high end of the range of impacts is reached as DOE expects, TSL 4 could result in a net loss of 42.1 percent in INPV for traditional DHE and a net loss of 17.1 percent in INPV for gas hearth DHE. In addition to the large, negative impacts on INPV at TSL 4, the required capital and product conversion costs could cause material harm to a significant number of small businesses in both the traditional and gas hearth DHE market. These manufacturers could be forced to reduce their product offerings to remain competitive.

The Secretary tentatively concludes that at trial standard level 4, the benefits of energy savings, generating capacity reductions, and emission reductions would be outweighed by the negative impacts on consumer NPV, the economic burden on some consumers, the large capital conversion costs that could result in a large reduction in INPV for the manufacturers, and the potential for small businesses of DHE to reduce their product offerings. Consequently, the Secretary has tentatively concluded that trial standard level 4 is not economically justified.

Next, DOE considered TSL 3. TSL 3 would save 0.22 quads of energy, an amount DOE considers significant. TSL 3 would provide a NPV of consumer benefit of $0.91 billion, using a discount rate of 7 percent, and $2.22 billion, using a discount rate of 3 percent.

The emissions reductions at TSL 3 are 8.5 Mt of CO_2 and 7.7 kt of NO_X. The estimated monetary value of the cumulative CO_2 emissions reductions at TSL 3 is $21.8 to $240 million, using a discount rate of 7 percent, and $46.2 to $508 million, using a discount rate of 3 percent. Total electric generating capacity in 2044 is estimated to increase slightly under TSL 3.

At TSL 3, DOE projects that the average LCC impact for consumers is a gain of $104 for gas wall fan DHE, $192 for gas wall gravity DHE, $13 for gas floor DHE, $143 for gas room DHE, and $96 for gas hearth DHE. The median payback period is 6.0 years for gas wall fan DHE, 8.3 years for gas wall gravity DHE, 14.7 years for gas floor DHE, 5.3 years for gas room DHE, and 0.0 years for gas hearth DHE. At TSL 3, the fraction of consumers experiencing an LCC benefit is 56 percent for gas wall fan DHE, 61 percent for gas wall gravity DHE, 18 percent for gas floor DHE, 55 percent for gas room DHE, and 40 percent for gas hearth DHE. The fraction of consumers experiencing an LCC cost is 30 percent for gas wall fan DHE, 39 percent for gas wall gravity DHE, 25 percent for gas floor DHE, 20 percent for gas room DHE, and 9 percent for gas hearth DHE.

At TSL 3, the projected change in INPV ranges from a decrease of up to $6 million for traditional DHE and decrease of up to $1 million for gas hearth DHE. Most traditional direct heating manufacturers have existing products that meet the efficiencies required at TSL 3 in three out of four product categories. The impacts on gas hearth manufacturers are less significant at TSL 3 because manufacturers offer a wide range of product lines that meet the required efficiencies at TSL 3 and most products that do not meet TSL 3 could be upgraded with inexpensive purchased parts and fairly small conversion costs. If the high end of the range of impacts is reached, TSL 3 could result in a net loss of 33.5 percent in INPV for traditional DHE and a net loss of 1.1 percent in INPV for gas hearth DHE. In addition, the required capital and product conversion costs faced by small businesses decrease, mitigating the potential harm to a significant number of small businesses.

After considering the analysis, comments on the January 13, 2009, notice and the preliminary TSD, and the benefits and burdens of TSL 3, the Secretary tentatively concludes that this trial standard level will offer the maximum improvement in efficiency that is technologically feasible and economically justified, and will result in significant conservation of energy. Further, benefits from carbon dioxide reductions (at a central value of $20) would increase NPV by between $21.8 million and $240 million (2008$) at a 7% discount rate and between $46.2 million and $508 million at a 3% discount rate. These benefits from carbon dioxide emission reductions, when considered in conjunction with the consumer savings NPV and other factors described above support DOE's tentative conclusion that trial standard level 3 is economically justified. Therefore, the Department today proposes to adopt the energy conservation standards for DHE at TSL 3, as shown in Table V.63.

TABLE V.63—PROPOSED MINIMUM AFUE REQUIREMENTS FOR DIRECT HEATING EQUIPMENT (TSL 3)

Direct heating equipment design type	Product class input capacity range Btu/h	Annual fuel utilization efficiency %
Gas wall fan	up to 42,000	76
	over 42,000	77
Gas wall gravity	up to 27,000	70
	over 27,000 and up to 46,000	71
	over 46,000	72
Gas floor	up to 37,000	57
	over 37,000	58
Gas room	up to 20,000	62
	over 20,000 and up to 27,000	67
	over 27,000 and up to 46,000	68
	over 46,000	69
Gas hearth	up to 20,000	61
	over 20,000 and up to 27,000	66
	over 27,000 and up to 46,000	67
	over 46,000	68

DOE also calculated the annualized values for certain benefits and costs under the considered TSLs. The annualized values refer to consumer operating cost savings, consumer incremental product and installation costs, the quantity of emissions reductions for CO_2, NO_X, and Hg, and the monetary value of CO_2 emissions reductions (using a value of \$20/t CO_2, which is in the middle of the values considered by DOE for valuing the potential global benefits resulting from reduced CO_2 emissions).

DOE used a two-step calculation process to convert the time-series of costs and benefits into annualized values. First, DOE calculated a present value for the time-series of costs and benefits using a discount rate of either three or seven percent. From the present value, DOE then calculated the fixed annual payment over the analysis time period (2013 to 2043 for DHE) that yielded the same present value. The fixed annual payment is the annualized value. Although DOE calculated annualized values, this does not imply that the time-series of cost and benefits from which the annualized values were determined are a steady stream of payments. Table V.64 presents the annualized values for each TSL considered for DHE.

TABLE V.64—ANNUALIZED BENEFITS AND COSTS FOR DIRECT HEATING EQUIPMENT BY TRIAL STANDARD LEVEL

TSL	Category	Unit	Primary Estimate (AEO reference case)		Low Estimate (AEO low growth case)		High Estimate (AEO high growth case)	
			7%	3%	7%	3%	7%	3%
	Benefits							
1	Monetized Operating Cost Savings.	Million 2008$	97.7	121.1	93.5	115.5	100.7	125.0
	Quantified Emissions Reductions.	CO_2 (Mt)	0.18	0.20	0.32	0.34	0.10	0.11
		NO_X (kt)	0.16	0.18	0.27	0.28	0.10	0.12
		Hg (t)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
	Monetized Avoided CO_2 Value (at \$19/t).	Million 2008$	6.1	7.2	0.5	0.5	15.4	29.0
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	28.1	27.4	28.1	27.4	28.1	27.4
	Net Benefits							
	Monetized Value	Million 2008$	75.7	100.9	65.8	88.7	88.0	126.5
	Benefits							
2	Monetized Operating Cost Savings.	Million 2008$	108.8	135.0	104.1	128.9	112.2	139.3
	Quantified Emissions Reductions.	CO_2 (Mt)	0.20	0.22	0.35	0.37	0.11	0.12
		NO_X (kt)	0.18	0.20	0.30	0.32	0.11	0.13
		Hg (t)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)

TABLE V.64—ANNUALIZED BENEFITS AND COSTS FOR DIRECT HEATING EQUIPMENT BY TRIAL STANDARD LEVEL—Continued

TSL	Category	Unit	Primary Estimate (AEO reference case)		Low Estimate (AEO low growth case)		High Estimate (AEO high growth case)	
			7%	3%	7%	3%	7%	3%
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	6.7	8.1	0.8	0.9	25.3	46.4
	Costs							
	Monetized ..... Incremental Product and Installation Costs.	Million 2008$	31.3	30.5	31.3	30.5	31.3	30.5
	Net Benefits							
	Monetized Value	Million 2008$	84.2	112.6	73.6	99.3	106.1	155.2
	Benefits							
3	Monetized Operating Cost Savings.	Million 2008$	132.2	164.4	126.4	156.9	136.2	169.6
	Quantified Emissions Reductions.	CO_2 (Mt)	0.24	0.27	0.43	0.46	0.13	0.14
		NO_X (kt)	0.22	0.24	0.36	0.38	0.14	0.15
		Hg (t)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	8.2	9.8	2.5	2.9	21.0	42.6
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	41.8	40.6	41.8	40.6	41.8	40.6
	Net Benefits							
	Monetized Value	Million 2008$	98.5	133.5	87.1	119.2	115.4	171.6
	Benefits							
4	Monetized Operating Cost Savings.	Million 2008$	250.4	310.9	239.6	297.0	257.9	320.7
	Quantified Emissions Reductions.	CO_2 (Mt)	0.48	0.52	0.85	0.89	0.32	0.36
		NO_X (kt)	0.43	0.48	0.71	0.75	0.32	0.36
		Hg (t)	0.001	0.000	(0.003)	(0.004)	(0.000)	0.000
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	16.1	19.2	3.0	3.5	17.7	39.5
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	337.8	329.1	337.8	329.1	337.8	329.1
	Net Benefits							
	Monetized Value	Million 2008$	(71.3)	1.0	(95.2)	(28.6)	(62.2)	31.1
	Benefits							
5	Monetized Operating Cost Savings.	Million 2008$	279.4	347.3	267.3	331.8	287.7	358.3
	Quantified Emissions Reductions.	CO_2 (Mt)	0.53	0.58	0.93	0.99	0.35	0.40
		NO_X (kt)	0.48	0.53	0.79	0.83	0.35	0.40
		Hg (t)	0.001	0.000	(0.003)	(0.004)	(0.000)	0.000

TABLE V.64—ANNUALIZED BENEFITS AND COSTS FOR DIRECT HEATING EQUIPMENT BY TRIAL STANDARD LEVEL—Continued

TSL	Category	Unit	Primary Estimate (AEO reference case)		Low Estimate (AEO low growth case)		High Estimate (AEO high growth case)	
			7%	3%	7%	3%	7%	3%
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	17.8	21.2	4.1	4.7	65.3	152.0
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	371.6	361.8	371.6	361.8	371.6	361.8
	Net Benefits							
	Monetized Value	Million 2008$	(74.5)	6.7	(100.1)	(25.3)	(18.6)	148.5
	Benefits							
6	Monetized Operating Cost Savings.	Million 2008$	686.8	850.9	656.6	811.8	707.9	878.5
	Quantified Emissions Reductions.	CO_2 (Mt)	1.24	1.35	2.21	2.33	0.81	0.92
		NO_X (kt)	1.13	1.23	1.87	1.98	0.82	0.93
		Hg (t)	0.001	0.001	(0.007)	(0.011)	(0.000)	0.000
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	41.5	49.4	8.6	10.0	74.7	181.1
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	1,036.2	997.3	1,036.2	997.3	1,036.2	997.3
	Net Benefits							
	Monetized Value	Million 2008$	(307.9)	(97.0)	(371.0)	(175.6)	(253.5)	62.3

3. Pool Heaters

Table V.65 presents a summary of the energy savings and economic impacts for each TSL considered for pool heaters.

TABLE V.65—SUMMARY OF RESULTS FOR POOL HEATERS

Category	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6
National Energy Savings (quads)	0.02	0.03	0.08	0.10	0.13	0.28
3% discount rate	0.01	0.02	0.05	0.06	0.08	0.16
7% discount rate	0.00	0.01	0.03	0.03	0.04	0.09
NPV of Consumer Benefits (2008$ billion):						
3% discount rate	0.16	0.18	0.40	0.25	(1.97)	(4.51)
7% discount rate	0.08	0.07	0.14	0.03	(1.27)	(2.94)
Industry Impacts:						
Industry NPV (2008$ million)	0.1–(0.2)	0.4–(1.0)	(0.2)–(5.6)	0.5–(7.5)	3.1–(19.5)	12.9–(44.5)
Industry NPV (% change)	0.1–(0.3)	0.7–(1.7)	(0.4)–(9.1)	0.9–(12.1)	5.0–(31.8)	21.0–(72.6)
Cumulative Emissions Reduction*:						
CO_2 (Mt)	0.61	1.05	3.31	4.21	5.74	12.12
NO_X (kt)	0.55	0.94	2.98	3.74	5.10	10.77
Value of Cumulative Emissions Reduction (2008$ million) ‡:						
CO_2—3% discount rate	3.3 to 36	5.7 to 63	18 to 197	23 to 251	31 to 342	66 to 723
CO_2—7% discount rate	1.6 to 18	2.8 to 31	8.9 to 97	11 to 123	15 to 168	33 to 354
NO_X—3% discount rate	0.1 to 1.4	0.2 to 2.4	0.7 to 7.7	0.9 to 9.7	1.3 to 13.2	2.7 to 27.8
NO_X—7% discount rate	0.1 to 0.7	0.1 to 1.3	0.4 to 4.0	0.5 to 5.0	0.7 to 6.9	1.4 to 14.5
Mean LCC Savings** (2008$)	24	18	39	(13)	(555)	(1,323)
Median PBP (years)	2.5	7.4	10.6	13.0	28.6	28.1
Distribution of Consumer LCC Impacts:						

TABLE V.65—SUMMARY OF RESULTS FOR POOL HEATERS—Continued

Category	TSL 1	TSL 2	TSL 3	TSL 4	TSL 5	TSL 6
Net Cost (%)	6	31	52	59	90	96
No Impact (%)	64	46	24	22	6	1
Net Benefit (%)	30	22	24	20	5	3
Generation Capacity Change (GW)***	+ 0.002	+ 0.004	+ 0.011	+ 0.012	+ 0.016	+ 0.034
Employment Impacts:						
Total Potential Changes in Domestic Production Workers in 2013	(644)–13	(644)–34	(644)–66	(644)–93	(644)–163	(644)–331
Indirect domestic jobs (thousands)***	3.32	4.38	6.70	8.49	50.59	14.82

Parentheses indicate negative (−) values.
* The impacts for Hg emissions are negligible (less than 0.01 ton).
** For LCCs, a negative value means an increase in LCC by the amount indicated.
*** Changes in 2042.
‡ Range of the economic value of CO_2 reductions is based on estimates of the global benefit of reduced CO_2 emissions.

DOE first considered TSL 6, the max-tech level. TSL 6 would save 0.28 quads of energy, an amount DOE considers significant. TSL 6 would decrease consumer NPV by $2.9 billion, using a discount rate of 7 percent, and by $4.5 billion, using a discount rate of 3 percent.

The emissions reductions at TSL 6 are 12.1 Mt of CO_2 and 10.8 kt of NO_X. The estimated monetary value of the cumulative CO_2 emissions reductions at TSL 6 is $33 million to $354 million, using a discount rate of 7 percent, and $66 million to $723 million, using a discount rate of 3 percent. Total generating capacity in 2044 is estimated to increase slightly under TSL 6.

At TSL 6, DOE projects that the average LCC impact for consumers is a loss of $1,323. The median payback period is 28.1 years (which is substantially longer than the mean lifetime of the product). At TSL 6, the fraction of consumers experiencing an LCC benefit is 3 percent. The fraction of consumers experiencing an LCC cost is 96 percent.

At TSL 6, the projected change in INPV to decrease by up to $44.5 million for gas-fired pool heaters. Currently, gas-fired pool heaters that meet the efficiencies required by TSL 6 are manufactured in extremely low volumes by a limited number of manufacturers. The significant impacts on manufacturers arise from the large costs to develop or increase the production of fully condensing products. In addition, manufacturers are significantly harmed if profitability is negatively impacted to keep consumers in the market for a luxury item that is significantly more expensive than most products currently sold. If the high end of the range of impacts is reached as DOE expects, TSL 6 could result in a net loss of 72.6 percent in INPV for gas-fired pool heaters.

The Secretary tentatively concludes that at TSL 6, the benefits of energy savings and emission reductions would be outweighed by the negative economic impacts to the Nation, the economic burden on some consumers (as indicated by the large increase in total installed cost), and the large capital conversion costs that could result in a large reduction in INPV for the manufacturers. Consequently, the Secretary has tentatively concluded that TSL 6 is not economically justified.

Next, DOE considered TSL 5. TSL 5 would save 0.13 quads of energy, an amount DOE considers significant. TSL 5 would decrease consumer NPV by $1.3 billion, using a discount rate of 7 percent, and by $2.0 billion, using a discount rate of 3 percent.

The emissions reductions at TSL 5 are 5.7 Mt of CO_2 and 5.1 kt of NO_X. The estimated monetary value of the cumulative CO_2 emissions reductions at TSL 5 is $15 million to $168 million, using a discount rate of 7 percent, and $31 million to $342 million, using a discount rate of 3 percent. Total generating capacity in 2044 is estimated to increase slightly under TSL 5.

At TSL 5, DOE projects that the average LCC impact for consumers is a loss of $555. The median payback period is 28.6 years (which is substantially longer than the mean lifetime of the product). At TSL 5, the fraction of consumers experiencing an LCC benefit is 5 percent. The fraction of consumers experiencing an LCC cost is 90 percent.

At TSL 5, the projected change in INPV to decrease by up to $19.5 million for gas-fired pool heaters. Currently, gas-fired pool heaters that meet the efficiencies required by TSL 5 are manufactured in extremely low volumes by a limited number of manufacturers, as with TSL 6. The significant adverse impacts on manufacturers arise from the large costs to develop or increase the production of products with multiple efficiency improvements. In addition, the potential for manufacturers to be significantly harmed increases if consumers purchasing decisions are impacted and shipments decline due to the large increases in first cost for a luxury item. If the high end of the range of impacts is reached as DOE expects, TSL 5 could result in a net loss of 31.8 percent in INPV for gas-fired pool heaters.

The Secretary tentatively concludes that at TSL 5, the benefits of energy savings and emission reductions would be outweighed by the negative economic impacts to the Nation, the economic burden on some consumers (as indicated by the large increase in total installed cost), and the large capital conversion costs that could result in a large reduction in INPV for the manufacturers. Consequently, the Secretary has tentatively concluded that TSL 5 is not economically justified.

Next, DOE considered TSL 4. TSL 4 would save 0.10 quads of energy, an amount DOE considers significant. TSL 4 would increase consumer NPV by $0.03 billion, using a discount rate of 7 percent, and by $0.25 billion, using a discount rate of 3 percent.

The cumulative emissions reductions at TSL 4 are 4.2 Mt of CO_2 and 3.7 kt of NO_X. The estimated monetary value of the cumulative CO_2 emissions reductions at TSL 4 is $11 million to $123 million, using a discount rate of 7 percent, and $23 million to $251 million, using a discount rate of 3 percent. Total generating capacity in 2044 is estimated to increase slightly under TSL 4.

At TSL 4, the estimated increase in the installed cost is $335. Because this increase is substantially balanced by a decrease in operating costs, DOE projects that the average LCC impact for consumers is a loss of $13 (note that this quantity represents only 0.2 percent of the average total LCC). The median payback period is 13.0 years, compared to a typical product life of 8 years. At TSL 4, the fraction of consumers

experiencing an LCC benefit is 20 percent. The fraction of consumers experiencing a net increase in LCC (mainly due to having low pool heater operation) is 59 percent. Of these consumers, the average net increase in LCC would be about $172, which is about 3 percent of the average LCC for these consumers.

At TSL 4, DOE projects that INPV decreases by up to $7.5 million for gas-fired pool heaters. At TSL 4, manufacturers believe that profitability could be harmed in order to keep consumers in the market for a luxury item that is more expensive than the most common products currently sold. If the high end of the range of impacts is reached as DOE expects, TSL 4 could result in a net loss of 12.1 percent in INPV for gas-fired pool heaters.

After considering the analysis, comments on the January 13, 2009, notice and the preliminary TSD, and the benefits and burdens of TSL 4, the Secretary tentatively concludes that this trial standard level will offer the maximum improvement in efficiency that is technologically feasible and economically justified, and will result in significant conservation of energy. Further, benefits from carbon dioxide reductions (at a central value of $20) would increase NPV by between $11 million and $123 million (2008$) at a 7% discount rate and between $23 million and $251 million at a 3% discount rate. These benefits from carbon dioxide emission reductions, when considered in conjunction with the consumer savings NPV and other factors described above support DOE's tentative conclusion that trial standard level 4 is economically justified. Therefore, the Department today proposes to adopt the energy conservation standards for pool heaters at TSL 4, which requires a thermal efficiency of 84 percent for gas-fired pool heaters as shown in Table V.66. As discussed above, approximately 59 percent of consumers with pool heaters would experience a life cycle cost from the proposed standard for pool heaters, TSL 4. Further, DOE estimates that one-quarter of these consumers would experience LCC of less than 2%. Although most consumers would experience some savings or very small increases in life cycle costs, DOE is seeking comment regarding the appropriateness of proposing TSL 4 for pool heaters since this efficiency level would increase life-cycle costs for most consumers. DOE also seeks comment on its consideration of TSL 3 as an alternative for the final standard level for pool heaters. (See Issue 18 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

TABLE V.66—PROPOSED MINIMUM THERMAL EFFICIENCY REQUIREMENTS FOR POOL HEATERS (TSL 4)

Product class	Thermal efficiency %
Gas-fired Pool Heaters	84

DOE also calculated the annualized values for certain benefits and costs under the considered pool heater TSLs. The annualized values refer to consumer operating cost savings, consumer incremental product and installation costs, the quantity of emissions reductions of CO_2, NO_X, and Hg, and the monetary value of CO_2 emissions reductions (using a value of $20/t CO_2, which is in the middle of the values considered by DOE for valuing the potential global benefits resulting from reduced CO_2 emissions).

DOE used a two-step calculation process to convert the time-series of costs and benefits into annualized values. First, DOE calculated a present value for the time-series of costs and benefits using a discount rate of either three or seven percent. From the present value, DOE then calculated the fixed annual payment over the analysis time period (2013 to 2043 for pool heaters) that yielded the same present value. The fixed annual payment is the annualized value. Although DOE calculated annualized values, this does not imply that the time-series of costs and benefits from which the annualized values were determined are a steady stream of payments. Table V.67 presents the annualized values for each TSL considered for pool heaters.

TABLE V.67—ANNUALIZED BENEFITS AND COSTS FOR POOL HEATERS BY TRIAL STANDARD LEVEL

TSL	Category	Unit	Primary estimate (AEO reference case)		Low estimate (AEO low growth case)		High estimate (AEO high growth case)	
			7%	3%	7%	3%	7%	3%
	Benefits							
1	Monetized Operating Cost Savings.	Million 2008$	9.52	10.93	9.10	10.43	9.80	11.26
	Quantified Emissions Reductions.	CO_2 (Mt)	0.02	0.02	0.02	0.03	0.01	0.01
		NO_X (kt)	0.017	0.018	0.021	0.022	0.013	0.014
		Hg (t)	0.000	0.000	(0.000)	(0.000)	(0.000)	0.000
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	0.61	0.70	0.82	0.94	0.47	0.54
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	2.06	1.98	2.06	1.98	2.06	1.98
	Net Benefits							
	Monetized Value	Million 2008$	8.07	9.65	7.86	9.39	8.21	9.82
	Benefits							

TABLE V.67—ANNUALIZED BENEFITS AND COSTS FOR POOL HEATERS BY TRIAL STANDARD LEVEL—Continued

TSL	Category	Unit	Primary estimate (AEO reference case)		Low estimate (AEO low growth case)		High estimate (AEO high growth case)	
			7%	3%	7%	3%	7%	3%
2	Monetized Operating Cost Savings.	Million 2008$	16.35	18.78	15.64	17.92	16.83	19.35
	Quantified Emissions Reductions.	CO_2 (Mt)	0.03	0.03	0.04	0.04	0.02	0.03
		NO_X (kt)	0.029	0.030	0.036	0.038	0.023	0.024
		Hg (t)	0.000	0.000	(0.000)	(0.000)	(0.000)	0.000
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	1.06	1.20	1.40	1.62	0.80	0.93
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	8.98	8.66	8.98	8.66	8.98	8.66
	Net Benefits							
	Monetized Value	Million 2008$	8.42	11.33	8.06	10.88	8.65	11.62
	Benefits							
3	Monetized Operating Cost Savings.	Million 2008$	50.33	57.83	48.16	55.20	51.79	59.57
	Quantified Emissions Reductions.	CO_2 (Mt)	0.10	0.11	0.13	0.14	0.08	0.08
		NO_X (kt)	0.091	0.095	0.113	0.120	0.072	0.077
		Hg (t)	0.000	0.000	(0.000)	(0.001)	(0.000)	0.000
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	3.33	3.80	4.42	5.10	2.55	2.93
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	36.72	35.38	36.72	35.38	36.72	35.38
	Net Benefits							
	Monetized Value	Million 2008$	16.94	26.25	15.86	24.92	17.62	27.12
	Benefits							
4	Monetized Operating Cost Savings.	Million 2008$	59.88	68.79	57.29	65.66	61.62	70.86
	Quantified Emissions Reductions.	CO_2 (Mt)	0.13	0.13	0.16	0.17	0.09	0.10
		NO_X (kt)	0.112	0.119	0.134	0.143	0.085	0.091
		Hg (t)	0.000	0.000	(0.000)	(0.001)	(0.000)	0.000
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	4.20	4.84	5.24	6.08	3.01	3.47
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	56.66	54.59	56.66	54.59	56.66	54.59
	Net Benefits							
	Monetized Value	Million 2008$	7.41	19.04	5.88	17.15	7.97	19.74
	Benefits							
5	Monetized Operating Cost Savings.	Million 2008$	82.08	94.30	78.54	90.00	84.48	97.14
	Quantified Emissions Reductions.	CO_2 (Mt)	0.17	0.18	0.21	0.23	0.12	0.13
		NO_X (kt)	0.153	0.162	0.183	0.195	0.116	0.124
		Hg (t)	0.000	0.000	(0.000)	(0.001)	(0.000)	0.000

TABLE V.67—ANNUALIZED BENEFITS AND COSTS FOR POOL HEATERS BY TRIAL STANDARD LEVEL—Continued

TSL	Category	Unit	Primary estimate (AEO reference case)		Low estimate (AEO low growth case)		High estimate (AEO high growth case)	
			7%	3%	7%	3%	7%	3%
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	5.72	6.58	7.15	8.25	4.11	4.73
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	207.11	204.15	207.11	204.15	207.11	204.15
	Net Benefits							
	Monetized Value	Million 2008$	(119.31)	(103.27)	(121.42)	(105.90)	(118.52)	(102.28)
	Benefits							
6	Monetized Operating Cost Savings.	Million 2008$	174.79	200.78	167.22	191.59	179.91	206.84
	Quantified Emissions Reductions.	CO_2 (Mt)	0.37	0.39	0.45	0.48	0.26	0.27
		NO_X (kt)	0.324	0.343	0.388	0.411	0.244	0.261
		Hg (t)	0.000	0.000	(0.001)	(0.002)	(0.000)	0.000
	Monetized Avoided CO_2 Value (at $19/t).	Million 2008$	12.04	13.94	15.10	17.45	8.65	9.98
	Costs							
	Monetized Incremental Product and Installation Costs.	Million 2008$	464.57	452.23	464.57	452.23	464.57	452.23
	Net Benefits							
	Monetized Value	Million 2008$	(277.74)	(237.52)	(282.25)	(243.19)	(276.01)	(235.41)

VI. Procedural Issues and Regulatory Review

A. Review Under Executive Order 12866

Section 1(b)(1) of Executive Order 12866, ''Regulatory Planning and Review,'' 58 FR 51735 (Oct. 4, 1993), requires each agency to identify in writing the market failure or other problem that it intends to address, and that warrants agency action (including where applicable, the failure of private markets or public institutions), as well as assess the significance of that problem, to enable assessment of whether any new regulation is warranted. The problems that today's proposed standards address are as follows:

(1) There is a lack of consumer information and/or information processing capability about energy efficiency opportunities in the home appliance market.

(2) There is asymmetric information (one party to a transaction has more and better information than the other) and/or high transactions costs (costs of gathering information and effecting exchanges of goods and services).

(3) There are external benefits resulting from improved energy efficiency of heating products that are not captured by the users of such equipment. These benefits include externalities related to environmental protection and energy security that are not reflected in energy prices, such as reduced emissions of greenhouse gases.

In addition, DOE has determined that today's regulatory action is a ''significant regulatory action'' under section 3(f)(1) of Executive Order 12866. Accordingly, section 6(a)(3) of the Executive Order requires that DOE prepare a regulatory impact analysis (RIA) on today's proposed rule and that the Office of Information and Regulatory Affairs (OIRA) in the OMB review this proposed rule. DOE presented to OIRA for review the draft proposed rule and other documents prepared for this rulemaking, including the RIA, and has included these documents in the rulemaking record. They are available for public review in the Resource Room of DOE's Building Technologies Program, 950 L'Enfant Plaza, SW., Suite 600, Washington, DC 20024, (202) 586–2945, between 9:00 a.m. and 4:00 p.m., Monday through Friday, except Federal holidays.

The RIA is contained in the TSD prepared for the rulemaking. The RIA consists of: (1) A statement of the problem addressed by this regulation, and the mandate for government action; (2) a description and analysis of the feasible policy alternatives to this regulation; (3) a quantitative comparison of the impacts of the alternatives; and (4) the national economic impacts of the proposed standards.

The RIA calculates the effects of feasible policy alternatives to mandatory standards for heating products, and provides a quantitative comparison of the impacts of the alternatives. DOE evaluated each alternative in terms of its ability to achieve significant energy savings at reasonable costs, and compared it to the effectiveness of the proposed rule. DOE analyzed these alternatives using a series of regulatory scenarios for the three types of heating products. It modified the heating

product NIA models to allow inputs for these policy alternatives. Of the four product classes of residential water heaters subject to proposed standards, this RIA concerns only gas-fired storage and electric storage water heaters, which together represent the majority of shipments. Of the five product classes of DHE, this RIA concerns only gas wall fan DHE and gas hearth DHE, which together represent the majority of DHE shipments.

DOE identified the following major policy alternatives for achieving increased energy efficiency in the three types of heating products:

- No new regulatory action;
- Consumer rebates;
- Consumer tax credits;
- Manufacturer tax credits;
- Voluntary energy efficiency targets;
- Bulk government purchases;
- Early replacement programs; and
- The proposed approach (energy conservation standards).

DOE evaluated each alternative in terms of its ability to achieve significant energy savings at reasonable costs and compared it to the effectiveness of the proposed rule. Table VI.1 through Table VI.5 show the results for energy savings and consumer NPV.

TABLE VI.1—IMPACTS OF NON-REGULATORY ALTERNATIVES FOR GAS-FIRED STORAGE WATER HEATERS THAT MEET THE PROPOSED STANDARD (TSL 4)

Policy alternative	Primary energy savings *quads*	Net present value* *billion 2008$*	
		7% discount rate	3% discount rate
No New Regulatory Action	0.00	0.00	0.00
Consumer Rebates	0.51	1.19	3.46
Consumer Tax Credits	0.31	0.72	2.08
Manufacturer Tax Credits	0.15	0.36	1.04
Voluntary Energy Efficiency Targets	0.12	0.29	0.83
Early Replacement	0.001	−0.02	−0.04
Bulk Government Purchases	0.005	0.01	0.04
Proposed Standard	1.29	3.09	9.04

* DOE determined the NPV from 2015 to 2045.

TABLE VI.2—IMPACTS OF NON-REGULATORY ALTERNATIVES FOR ELECTRIC STORAGE WATER HEATERS THAT MEET THE PROPOSED STANDARD (TSL 4)

Policy alternative	Primary energy savings *quads*	Net present value* *billion 2008$*	
		7% discount rate	3% discount rate
No New Regulatory Action	0.00	0.00	0.00
Consumer Rebates	0.42	0.47	1.87
Consumer Tax Credits	0.25	0.28	1.12
Manufacturer Tax Credits	0.13	0.14	0.56
Voluntary Energy Efficiency Targets	0.09	0.19	0.60
Early Replacement	0.0023	−0.03	−0.05
Bulk Government Purchases	0.0017	0.004	0.01
Proposed Standard	1.21	1.59	6.02

* DOE determined the NPV from 2015 to 2045.

TABLE VI.3—IMPACTS OF NON-REGULATORY ALTERNATIVES FOR GAS WALL FAN DHE THAT MEET THE PROPOSED STANDARD (TSL 3)

Policy alternative	Primary energy savings *quads*	Net present value* *billion 2008$*	
		7% discount rate	3% discount rate
No New Regulatory Action	0.00	0.00	0.00
Consumer Rebates	0.003	0.010	0.023
Consumer Tax Credits	0.002	0.006	0.006
Manufacturer Tax Credits	0.001	0.003	0.003
Voluntary Energy Efficiency Targets	0.0003	0.001	0.001
Early Replacement	<0.0001	−0.00001	−0.00003
Bulk Government Purchases†	NA	NA	NA
Proposed Standard	0.013	0.042	0.11

* DOE determined the NPV from 2013 to 2043.

† DOE did not evaluate the bulk government purchase alternative for gas wall fan DHE because the market share associated with publicly-owned housing is minimal.

TABLE VI.4—IMPACTS OF NON-REGULATORY ALTERNATIVES FOR GAS HEARTH DHE THAT MEET THE PROPOSED STANDARD (TSL 3)

Policy alternative	Primary energy savings quads	Net present value* *billion 2008$*	
		7% discount rate	3% discount rate
No New Regulatory Action	0.00	0.00	0.00
Consumer Rebates	0.03	0.15	0.36
Consumer Tax Credits	0.02	0.09	0.22
Manufacturer Tax Credits	0.01	0.05	0.11
Voluntary Energy Efficiency Targets	0.012	0.06	0.15
Early Replacement	<0.001	−0.005	−0.006
Bulk Government Purchases†	NA	NA	NA
Proposed Standard	0.14	0. 64	1.52

* DOE determined the NPV from 2013 to 2043.
† DOE did not evaluate the bulk government purchase alternative for gas hearth DHE because the market share associated with publicly-owned housing is minimal.

TABLE VI.5—IMPACTS OF NON-REGULATORY ALTERNATIVES FOR POOL HEATERS THAT MEET THE PROPOSED STANDARDS (TSL 4)

Policy alternative	Primary energy savings *quads*	Net present value* *billion 2008$*	
		7% discount rate	3% discount rate
No New Regulatory Action	0.00	0.00	0.00
Consumer Rebates	0.02	0.01	0.04
Consumer Tax Credits	0.01	0.003	0.03
Manufacturer Tax Credits	0.005	0.002	0.01
Voluntary Energy Efficiency Targets	0.004	0.005	0.02
Early Replacement	<0.001	−0.002	−0.003
Bulk Government Purchases †	NA	NA	NA
Proposed Standard	0.10	0.03	0.25

* DOE determined the NPV from 2013 to 2043.
† DOE did not evaluate the bulk government purchase alternative for pool heaters because there is no market share associated with publicly-owned housing.

The NPV amounts shown in Table VI.1 through Table VI.5 refer to the NPV of consumer benefits. The costs to the government of each policy (such as rebates or tax credits) are not included in the costs for the NPV since, on balance, consumers in the aggregate both pay for rebates and tax credits through taxes and receive their benefits. The following paragraphs discuss the cumulative effect of each policy alternative listed in Table VI.1 through Table VI.5. (See the regulatory impact analysis in the NOPR TSD for details.) For comparison with the results reported below for the non-regulatory policies, the combined impacts of the proposed standards for the considered products are projected as 2.75 quads of national energy savings and an NPV of $5.39 billion (at a 7-percent discount rate).

No new regulatory action. The case in which no regulatory action is taken constitutes the ''base case'' (or ''no action'') scenario. Since this is the base case, energy savings and NPV are zero by definition.

Rebates. If consumers were offered a rebate that covered a portion of the incremental price difference between products meeting baseline efficiency levels and those meeting the energy efficiency levels in the proposed standard, DOE estimates that the percentage of consumers purchasing the more-efficient products would increase by 17.5 percent to 40 percent, depending on the product and the product class. DOE assumed this policy would permanently transform the market so that the increased percentage of consumers purchasing more-efficient products seen in the first year of the program would be maintained throughout the forecast period. At the estimated participation rates, the rebates would provide 0.98 quads of national energy savings and an NPV of $1.83 billion (at a 7-percent discount rate) for the considered products. Although DOE estimates that rebates would provide national benefits, they are expected to be much smaller than the benefits resulting from the proposed national standards.

Consumer Tax Credits. If consumers were offered a tax credit that covered a portion of the incremental price difference between products meeting baseline efficiency levels and those meeting the energy efficiency levels in the proposed standards, DOE's research suggests that the number of consumers buying a water heater, pool heater, or DHE that would take advantage of the tax credit would be approximately 60 percent of the number that would take advantage of rebates. As a result of the tax credit, the percentage of consumers purchasing more-efficient products would increase by 10.5 percent to 24 percent, depending on the product and product class. Therefore, tax credits would yield a fraction of the benefits of rebates. DOE assumed this policy would permanently transform the market so that the increased percentage of consumers purchasing more-efficient products seen in the first year of the program would be maintained throughout the forecast period. At the estimated participation rates, consumer tax credits would provide 0.59 quads of national energy savings and an NPV of $1.10 billion (at a seven-percent discount rate) for the considered products.

Manufacturer Tax Credits. DOE believes even smaller benefits would

result from a manufacturer tax credit program that would effectively result in a lower price to the consumer by an amount that covers part of the incremental price difference between products meeting baseline efficiency levels and those meeting the proposed standards. Because these tax credits would go to manufacturers instead of consumers, DOE believes that fewer consumers would be aware of this program than a consumer tax credit program. DOE assumes that 50 percent of the consumers who would take advantage of consumer tax credits would buy more-efficient products offered through a manufacturer tax credit program. Thus, as a result of the manufacturer tax credit, the percentage of consumers purchasing the more-efficient products would increase by 5.2 percent to 12 percent (*i.e.,* 50 percent of the impact of consumer tax credits), depending on the product class.

DOE assumed this policy would permanently transform the market so that the increased percentage of consumers purchasing more-efficient products seen in the first year of the program would be maintained throughout the forecast period. At the estimated participation rates, the rebates would provide 0.30 quads of national energy savings and an NPV of $0.56 billion (at a seven-percent discount rate) for the considered products. Thus, DOE estimated that manufacturer tax credits would yield a fraction of the benefits that consumer tax credits and rebates would provide.

Voluntary Energy Efficiency Targets. The Federal government's ENERGY STAR program has voluntary energy efficiency targets for gas-fired and electric storage water heaters and gas-fired instantaneous water heaters. Some equipment purchases that result from the ENERGY STAR program already are reflected in DOE's base-case scenario. DOE evaluated the potential impacts of increased marketing efforts by ENERGY STAR that would encourage the purchase of products meeting the proposed standard. DOE modeled the voluntary efficiency program based on this scenario and assumed that the resulting increased percentage of consumers purchasing more-efficient products would be maintained throughout the forecast period. DOE estimated that the enhanced effectiveness of voluntary energy efficiency targets would provide 0.23 quads of national energy savings and an NPV of $0.55 billion (at a 7-percent discount rate) for the considered products. Although this would provide national benefits, they would be much smaller than the benefits resulting from the proposed national standards.

Early Replacement Incentives. This policy alternative envisions a program to replace old, inefficient water heaters, DHE, and pool heaters with models meeting the efficiency levels in the proposed standards. DOE projected a 4-percent increase in the annual retirement rate of the existing stock in the first year of the program. It assumed the program would last as long as it took to completely replace all of the eligible existing stock in the year that the program begins (2013 or 2015). DOE estimated that such an early replacement program would provide negligible national energy savings and NPV for the considered products. The national energy savings benefits would be negligible in comparison with the benefits resulting from the proposed national standards, and the NPV would actually be negative.

Bulk Government Purchases. Under this policy alternative, the government would be encouraged to purchase increased amounts of equipment that meet the efficiency levels in the proposed standards. Federal, State, and local government agencies could administer such a program. At the Federal level, this would be an enhancement to the existing Federal Energy Management Program (FEMP). DOE modeled this program by assuming an increase in installation of equipment meeting the efficiency levels of the proposed standards among those households for whom government agencies purchase or influence the purchase of water heaters. (Because the market share of DHE units in publicly-owned housing is minimal and the market share of pool heaters in publicly-owned housing is zero, the Department did not consider bulk government purchases for those products.) DOE estimated that bulk government purchases would provide negligible national energy savings (0.01 quads) and NPV ($0.14 billion) for the considered products, benefits that are much smaller than those estimated for the proposed national standards.

Proposed Standards. DOE proposes to adopt the efficiency levels listed in section V.C. As indicated in the paragraphs above, none of the alternatives DOE examined would save as much energy as today's proposed standards. Also, several of the alternatives would require new enabling legislation because authority to carry out those alternatives may not exist.

Additional Policy Evaluation. In addition to the above non-regulatory policy alternatives, DOE evaluated the potential impacts of a policy that would allow States to require that some water heaters installed in new homes have an efficiency level higher than the Federal standard. At present, States are prohibited to require efficiency levels higher than the Federal standard; the considered policy would remove this prohibition in the case of residential water heaters. DOE notes that removing the prohibition would require either legislative authority or DOE approval, after a case-by-case basis consideration on the merits, of waivers submitted by States. For the present rulemaking, DOE evaluated the impacts that such a policy would have for electric storage water heaters.

Specifically, DOE estimated the impacts for a policy case in which several States adopted provisions in their building codes that would require electric storage water heaters to meet efficiency level 6 (2.0 EF, heat pump with two-inch insulation). DOE assumed that such codes would affect 25 percent of water heaters in all new homes built in the United States in 2015 and that the percentage would increase linearly to 75 percent by 2045. (DOE did not attempt to define the specific geographic areas that would be affected.) In this policy case, all other water heaters (those bought for replacement in existing homes) would meet the proposed standard level of 0.95 (efficiency level 5). DOE's analysis accounts for the estimate that some new homes would have a water heater with EF greater than or equal to 2.0 (*e.g.*, heat pump technology) in the absence of any amended standards (the base case).

Table VI.6 shows the additional estimated national energy savings that would result from the considered building code policy, as well as the net present value of additional benefits to consumers (the purchasers of new homes that have electric water heaters that have an EF of at least 2.0). The table also shows the estimated national energy savings and NPV for electric storage water heaters under the proposed standards. The energy savings from this State building code requirement for new homes would be greater than the savings from the proposed standard for electric storage water heaters. This contrasts with the non-regulatory policy alternatives discussed above, whose savings are lower than those of the proposed standards.

TABLE VI.6—IMPACTS OF POLICY ALLOWING STATES TO INCORPORATE REQUIREMENTS FOR HIGH-EFFICIENCY ELECTRIC STORAGE WATER HEATERS IN BUILDING CODES

Policy alternative	Primary energy savings *quads*	Net present value *billion 2008$*	
		7% discount rate	3% discount rate
Proposed Standard (TSL 4) (Electric Storage Water Heaters)	1.21	1.59	6.02
Proposed Standard (TSL 4) AND Policy Allowing States to Require Higher-Efficiency Electric Storage Water Heaters in New Homes	1.69	2.13	8.33

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires preparation of an initial regulatory flexibility analysis (IRFA) for any rule that by law must be proposed for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, ''Proper Consideration of Small Entities in Agency Rulemaking'' 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel's Web site *(http://www.gc.doe.gov).*

For the manufacturers of the three types of heating products, the Small Business Administration (SBA) has set a size threshold, which defines those entities classified as ''small businesses'' for the purposes of the statute. DOE used the SBA's small business size standards to determine whether any small entities would be subject to the requirements of the rule. 65 FR 30836, 30850 (May 15, 2000), as amended at 65 FR 53533, 53545 (September 5, 2000) and codified at 13 CFR part 121.The size standards are listed by North American Industry Classification System (NAICS) code and industry description and are available at *http://www.sba.gov/idc/groups/public/documents/sba_homepage/serv_sstd_tablepdf.pdf.* Residential water heater and pool heater manufacturing are classified under NAICS 335228, ''Other Major Household Appliance Manufacturing'' and DHE is classified under NAICS 333414, ''Heating Equipment (except warm air furnaces) Manufacturing.'' The SBA sets a threshold of 500 employees or less for an entity to be considered as a small business for both of these categories as shown in Table VI.7.

TABLE VI.7—SBA AND NAICS CLASSIFICATION OF SMALL BUSINESSES POTENTIALLY AFFECTED BY THIS RULE

Industry description	Revenue limit	Employee limit	NAICS
Residential Water Heater Manufacturing	N/A	500	335228
Direct Heating Manufacturing	N/A	500	333414
Pool Heater Manufacturing	N/A	500	335228

DOE reviewed the potential standard levels considered in today's NOPR under the provisions of the Regulatory Flexibility Act and the procedures and policies published on February 19, 2003. To better assess the potential impacts of this rulemaking on small entities, DOE conducted a more focused inquiry of the companies that could be small business manufacturers of products covered by this rulemaking. During its market survey, DOE used all available public information to identify potential small manufacturers. DOE's research involved several industry trade association membership directories (including AHRI, HPBA, and APSP), product databases (*e.g.,* AHRI, CEC, and ENERGY STAR databases), individual company Web sites, and marketing research tools (*e.g.,* Dunn and Bradstreet reports) to create a list of every company that manufactures or sells water heaters, DHE, and gas-fired pool heaters covered by this rulemaking. DOE also asked stakeholders and industry representatives if they were aware of any other small manufacturers during manufacturer interviews and at previous DOE public meetings. DOE reviewed all publicly-available data and contacted select companies on its list, as necessary, to determine whether they met the SBA's definition of a small business manufacturer of covered residential water heaters, DHE, and pool heaters. DOE screened out companies that did not offer products covered by this rulemaking, did not meet the definition of a ''small business,'' or are foreign owned and operated. Ultimately, DOE identified five small residential water heater manufacturers, 12 small DHE manufacturers, and one small pool heater manufacturer that produce covered products and can be considered small businesses. Next, DOE attempted to contact these potential small business manufacturers to request an interview about the possible impacts on small business manufacturers. The results of discussions with manufacturers are set forth below. From these discussions, DOE determined the expected impacts of the rule on affected small entities.

DOE looked at each type of heating product (water heaters, pool heaters, and direct heating) separately for purposes of determining whether certification was appropriate or an initial regulatory flexibility analysis was needed.

1. Water Heater Industry

The majority of residential water heaters are currently manufactured in the United States. Three large manufacturers control the overwhelming majority of storage water heater sales. Many foreign-owned and foreign-operated manufacturers of instantaneous gas-fired water heaters offer products for sale in the United States and make up part of the remaining domestic residential water heater market. A very small portion of the remaining residential water heater market is supplied by a combination of international and domestic companies, all of which have less than a one-

percent total market share. Part of the remaining market is also supplied by domestic companies that focus primarily on commercial, niche, or other products, but also manufacture residential water heaters that are covered by this rulemaking.

DOE identified five domestic small businesses that manufacture residential water heaters. Each company's product offerings were examined to help determine the potential impact of amended energy conservation standards.

Only one of the small businesses identified by DOE manufactures primarily products that are covered by this rulemaking. This company offers two gas-fired instantaneous water heaters and is also developing a heat pump water heater. The products offered by this manufacturer are expected to meet the ENERGY STAR criteria for residential water heaters and to achieve efficiencies higher than the levels being proposed in this NOPR. Therefore, DOE believes that none of the products offered by this manufacturer would be impacted by the proposed energy conservation standards for residential water heaters.

Three of the small businesses identified by DOE manufacture covered oil-fired residential water heaters, but focus mainly on other products. One of these three small businesses holds a significant portion of the residential oil-fired water heater market. The products offered by this manufacturer exceed the efficiencies of the proposed standard levels for residential oil-fired storage water heaters. Therefore, DOE does not believe that the products offered by this manufacturer would be impacted by the proposed energy conservation standards for residential water heaters. The two other two small businesses that manufacture residential oil-fired storage water heaters both have a lower market share and collectively ship fewer than 5,000 units per year. The first of these companies with low market share offers one residential oil-fired water heater model, but it would not need to be upgraded at the proposed energy conservation standard level. In addition, this manufacturer specializes in products outside of the scope of coverage for this rulemaking (*e.g.,* commercial gas-fired storage water heaters, indirect water heaters, commercial electric storage water heaters, storage tanks, and boilers). The other company with low market share in the residential oil-fired market offers seven different oil-fired storage water heater models. However, this company does not certify these products on public databases and does not provide information about the input capacity or efficiency in its product literature, making it difficult to determine whether these are commercial or residential products and if they would need to be upgraded in response to the proposed energy conversation standards. However, from a review of the company Web site, DOE believes this manufacturer is also focused mostly on non-covered products.

The final small manufacturer of residential water heaters has a full line of residential electric storage water heaters that would need to be upgraded or, possibly, discontinued in response to the proposed energy conservation standards. Depending on the importance of this residential line, this small business could exit the residential electric storage market rather than invest in the changes necessary to upgrade and recertify its existing electric storage products. However, this manufacturer has less than a one-percent market share in the residential storage water heater market. Product certification databases and the company Web site also indicate that this manufacturer focuses primarily on commercial water heaters and other non-covered products including indirect water heaters and boilers. Because of its focus on non-covered products, it is unlikely that this small business would be forced out of business in response to the proposed energy conservation standards.

Because only one small manufacturer with very low market share in the electric storage water heater market and potentially one small business with very low market share in the residential oil-fired market would potentially be impacted by the proposed energy conservation standards in today's rule, DOE certifies that the standards for water heaters set forth in the proposed rule, if promulgated, would not have a significant economic impact on a substantial number of small entities. Accordingly, DOE has not prepared a regulatory flexibility analysis for the water heaters portion of this rulemaking. DOE will transmit the certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the Small Business Administration for review under 5 U.S.C. 605(b).

DOE requests comment on the above analysis, as well as any information concerning small businesses that could be impacted by this rulemaking and the nature and extent of those potential impacts of the proposed energy conservation standards on small residential water heater manufacturers. (See Issue 19 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

2. Pool Heater Industry

The vast majority of residential pool heaters are currently manufactured in the United States. Four manufacturers supply over 95 percent of the market. Based on its market research, DOE identified only one small manufacturer of residential gas-fired pool heaters. The small manufacturer specializes in high-efficiency products that exceed the proposed energy conservation standard level, and, therefore, DOE does not believe the products offered by this manufacturer would be impacted by the proposed amended energy conservation standards for residential pool heaters. Additionally, this small business manufacturer has a very low share of the residential gas-fired pool heater market. Because only one small business manufacturer of residential gas-fired pool heaters with small market share exists and because this company's product exceeds the proposed energy conservation standard levels, DOE certifies that the standards for pool heaters set forth in the proposed rule, if promulgated, would not have a significant economic impact on a substantial number of small entities in the gas-fired pool heater industry. Accordingly, DOE has not prepared a regulatory flexibility analysis for the pool heaters portion of this rulemaking. DOE will transmit this certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the Small Business Administration for review under 5 U.S.C 605(b).

DOE requests comment on the above analysis, as well as any information concerning small businesses that could be impacted by this rulemaking and the nature and extent of those potential impacts of the proposed energy conservation standards on small residential gas-fired pool heater manufacturers. (See Issue 20 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

3. Direct Heating Equipment Industry Characteristics

As discussed in further detail below, DOE determined that it cannot certify that the proposed energy conservation standard levels for DHE, if promulgated, would not have a significant economic impact on a substantial number of small entities. This determination results from the large number of small DHE manufacturers and the expected impact of the proposed standards on these manufacturers, as well as the likely greater impact of the proposed standards on these small businesses.

Consequently, DOE has prepared an IRFA for the direct heating equipment portion of this rulemaking, a copy of which DOE will transmit to the Chief Counsel for Advocacy of the SBA for review under 5 U.S.C 605(b). As presented and discussed below, the IFRA describes potential impacts on small DHE manufacturers associated with the required capital and product conversion costs at each TSL and discusses alternatives that could minimize these impacts.

a. Description and Estimated Number of Small Entities Regulated

After examining structure of the DHE industry, DOE determined it necessary to divide potential impacts on small DHE manufacturers into two broad categories: (1) Impacts on small manufacturers of traditional DHE (*i.e.,* manufacturers of gas wall fan, gas wall gravity, gas floor, and gas room DHE); and (2) impacts on small manufacturers of gas hearth products. The IRFA presents the results for traditional DHE and gas hearth DHE separately to be consistent with the MIA results in section V.B.2.b, which also separate DHE in this manner. Traditional DHE and gas hearth DHE are made by different manufacturers (*i.e.,* all manufacturers of gas hearth products do not manufacture traditional DHE, and vice versa, with one exception).

i. Traditional Direct Heating Equipment

Three major manufacturers control almost 100 percent of the traditional DHE market. Two of the three major manufacturers of traditional DHE are small businesses. One of the small businesses produces only traditional DHE and has products in all four traditional DHE product classes (*i.e.,* gas wall fan, gas wall gravity, gas floor, and gas room DHE). The second business produces all five products classes of DHE, including gas hearth DHE. DOE identified a third small business with less than a one-percent share of the traditional DHE market. This company offers two gas wall gravity models, but is mainly focused on specialty hearth products not covered by this rulemaking.

ii. Gas Hearth Direct Heating Equipment

DOE identified 10 small manufacturers of gas hearth DHE. Before issuing this NOPR, DOE attempted to contact the small business manufacturers of gas hearth DHE. One of the small businesses consented to being interviewed during the MIA interviews, and DOE received feedback from an additional two small businesses through survey responses. DOE also obtained information about small business impacts while interviewing manufacturers that exceed the small business size threshold of 500 employees in this industry. Both small business manufacturers and large manufacturers indicated that the number of competitors in the market has been declining in recent years due to industry consolidation and smaller companies exiting the market. Three major domestic manufacturers now supply a majority of the marketplace. None of the three major manufacturers is considered a small business. The remainder of the market is either imported (mostly by Canadian companies) or produced by one of 12 domestic manufacturers that hold varying market shares.

b. Reasons for the Proposed Rule

Title III of EPCA sets forth a variety of provisions designed to improve energy efficiency. Part A of Title III (42 U.S.C. 6291–6309) provides for the ''Energy Conservation Program for Consumer Products Other Than Automobiles.'' The program covers consumer products and certain commercial equipment, including residential DHE, and the statute directs DOE to consider new and amended energy conservation standards for those products. (42 U.S.C. 6292(9)) DOE is proposing in today's notice to amend energy conservation standards for DHE, as required by EPCA. (42 U.S.C. 6295(e)(4))

c. Objectives of, and Legal Basis for, the Proposed Rule

EPCA provides criteria for prescribing new or amended standards for covered products and equipment. (42 U.S.C 6295(o)) As indicated above, any new or amended standard for the products must be designed to achieve the maximum improvement in energy efficiency that is technologically feasible and economically justified (42 U.S.C. 6295(o)(2)(A)), although EPCA precludes DOE from adopting any standard that would not result in significant conservation of energy. (42 U.S.C. 6295(o)(3)(B)) Moreover, DOE may not prescribe a standard: (1) For certain products, if no test procedure has been established for the product; or (2) if DOE determines by rule that the standard is not technologically feasible or economically justified. (42 U.S.C. 6295(o)(3)) DOE's current test procedures for water heaters, vented DHE, and pool heaters appear at Title 10 Code of Federal Regulations (CFR) part 430, subpart B, appendices E, O and P, respectively. EPCA also provides that, in deciding whether a standard is economically justified, DOE must, after receiving comments on the proposed standard, determine whether the benefits of the standard exceed its burdens by considering to the greatest extent practicable seven enumerated factors (described in section II.B above of the preamble). (42 U.S.C. 6295(o)(2)(B)(i))

EPCA prescribes energy conservation standards for direct heating products, (42 U.S.C. 6295(e)(3)) and directs DOE to conduct two cycles of rulemakings to determine whether to amend these standards. (42 U.S.C. 6295(e)(4)) This rulemaking represents the first round of amendments to the energy conservation standards for DHE.

d. Description and Estimate of Compliance Requirements

i. Traditional Direct Heating Equipment

The number of manufacturers in the traditional DHE market has declined over the past decade and leveled off with three major manufacturers remaining. While DOE explicitly analyzed one representative input capacity range for the gas wall gravity, gas wall fan, gas floor, and gas room types of DHE, manufacturers offer product lines that typically span multiple BTU ranges with many different features. This can result in many individual products, or stock keeping units (SKUs), offered by each manufacturer per product line. The wide range of product offering by manufacturers is a legacy of a higher-volume market that now typically supplies replacement units. The remaining manufacturers have stayed in business by consolidating brands and the legacy products of companies that are no longer in business to take increasing shares of a smaller total market. Because each product line is manufactured in low volumes, the discrepancy between unit shipments and the number of product lines requiring significant product and capital conversion costs results in negative impacts for all manufacturers. Many product development costs (*e.g.,* testing, certification, and marketing) are somewhat fixed, making manufacturing scale an important consideration in determining whether the product conversion costs are economically justified. Similarly, even though any capital conversion costs can be capitalized over a number of years, these costs must be paid up front and have a large enough volume to justify an added per-unit cost.

DOE calculated its capital and product conversion costs for traditional DHE by estimating a per-product-line

cost and assuming that every manufacturer would face the same per-product-line cost within each product class. DOE also assumed that any product line that did not meet the efficiency level being analyzed would be upgraded, thereby requiring product conversion and capital conversion costs. DOE used public data to calculate the number of product lines that would need to be upgraded at each TSL for each product class. To show how the small businesses could be differentially harmed, DOE compared the conversion costs for a typical large manufacturer and a typical small manufacturer within the industry. To calculate the conversion costs for a typical small manufacturer and a typical large manufacturer, DOE used publicly-available information to determine the average number of product lines that met each efficiency level in each product category for a typical small manufacturer and a typical large manufacturer of traditional DHE. For both small and large, DOE multiplied the number of product lines that fell below the required efficiency level by its estimate of the per-line capital and product conversion cost. Table VI.8 and Table VI.9 show DOE's estimates for the average number of product lines at each TSL for a typical small manufacturer and a typical large manufacturer of traditional DHE, respectively.

TABLE VI.8—NUMBER OF PRODUCT LINES OF A TYPICAL SMALL MANUFACTURER

	Number of gas wall fan-type product lines at each TSL	Number of gas wall gravity-type product lines at each TSL	Number of gas floor-type product lines at each TSL	Number of gas room-type product lines at each TSL	Total product lines for all product classes
Baseline	2	*1.5	0.5	1	5
TSL 1	0	1	0.5	0.5	2
TSL 2	1	0.5	0.5	0.5	2.5
TSL 3	0.5	0	0.5	0	1
TSL 4	1	0	0.5	0	1.5
TSL 5	0	1	0.5	0	1.5
TSL 6	1	1	0.5	0	2.5

* Fractions of product lines result from taking the average number of product lines from publicly-available information.

TABLE VI.9—NUMBER OF PRODUCT LINES OF TYPICAL LARGE MANUFACTURER

	Number of gas wall fan-type product lines at each TSL	Number of gas wall gravity-type product lines at each TSL	Number of gas floor-type product lines at each TSL	Number of gas room-type product lines at each TSL	Total product lines for all product classes
Baseline	1	0	1	0	2
TSL 1	1	1	1	0	3
TSL 2	2	3	1	0	6
TSL 3	2	0	1	1	4
TSL 4	0	0	1	1	2
TSL 5	1	0	1	0	2
TSL 6	0	0	1	0	1

Amended energy conservation standards have the potential to differentially affect the small businesses, because they generally lack the large-scale resources to alter their existing products and production facilities for those TSLs requiring major redesigns. While all manufacturers would be expected to be negatively impacted by amended energy conservation standards to varying degrees, the small businesses would face higher product conversion costs at lower TSLs than their large competitor. Both large and small manufacturers have several product offerings in each product class, sometimes at varying efficiency levels, but the larger manufacturer produces products with higher efficiencies in larger volumes. As a result, the small manufacturers would have to upgrade more product lines than the large manufacturer at lower TSLs. As shown in Table VI.10 and Table VI.11, modifying facilities and developing new, more-efficient products would cause a typical small manufacturer to incur higher product conversion costs than a typical larger manufacturer for TSL 1 through TSL 5.

TABLE VI.10—TOTAL CONVERSION COSTS FOR A TYPICAL SMALL MANUFACTURER OF TRADITIONAL DIRECT HEATING EQUIPMENT

	Capital conversion costs for a typical small manufacturer (2008$ millions)	Product conversion costs for a typical small manufacturer (2008$ millions)	Total conversion costs for a typical small manufacturer (2008$ millions)
Baseline	0	0	0
TSL 1	0.58	0.29	0.86
TSL 2	1.03	0.44	1.47
TSL 3	1.61	0.69	2.31
TSL 4	1.89	0.80	2.69
TSL 5	1.57	1.20	2.77
TSL 6	2.13	1.40	3.53

TABLE VI.11—TOTAL CONVERSION COSTS FOR A TYPICAL LARGE MANUFACTURER OF TRADITIONAL DIRECT HEATING EQUIPMENT

	Capital conversion costs for a typical large manufacturer (2008$ millions)	Product conversion costs for a typical large manufacturer (2008$ millions)	Total conversion costs for a typical large manufacturer (2008$ millions)
Baseline	0	0	0
TSL 1	0.05	0.06	0.11
TSL 2	0.31	0.15	0.46
TSL 3	1.24	0.54	1.77
TSL 4	1.82	0.77	2.59
TSL 5	1.52	1.08	2.60
TSL 6	2.49	1.47	3.96

Because the larger manufacturer offers more products at higher efficiencies, a typical small manufacturer faces disproportionate costs at the lower TSLs in absolute terms at TSL 1 through TSL 5. However, at TSL 4 through TSL 6 a typical small manufacturer and a typical large manufacturer face similar product and capital conversion costs because a similar number of product lines fall below the required efficiencies. Despite being similar in absolute terms, at these TSLs the small manufacturers would be more likely to be disproportionately harmed at any TSL because they have a much lower volume across which to spread similar costs. To show how a smaller scale would harm a typical small business manufacturer, DOE used estimates of the market shares within the industry for each product class to estimate the typical annual revenue, operating profit, research and development expense, and capital expenditures for a typical large manufacturer and a typical small manufacturer using the financial parameters in the DHE GRIM. Comparing the conversion costs of a typical small manufacturer to a typical large manufacturer with operating profit (earnings before interest and taxation (EBIT)) is a rough estimate of how quickly the investments could be recouped. Table VI.12 and Table VI.13 show these comparisons.

TABLE VI.12—COMPARISON OF A TYPICAL SMALL MANUFACTURER'S CONVERSION COSTS TO ANNUAL EXPENSES, REVENUE, AND OPERATING PROFIT

	Capital conversion cost as a percentage of annual capital expenditures (percent)	Product conversion cost as a percentage of annual R&D expense (percent)	Total conversion cost as a percentage of annual revenue (percent)	Total conversion cost as a percentage of annual EBIT (percent)
Baseline	.....	.....	.....	.....
TSL 1	170	128	6	163
TSL 2	242	155	8	221
TSL 3	378	245	12	347
TSL 4	443	283	14	404
TSL 5	367	425	15	416
TSL 6	499	495	19	531

TABLE VI.13—COMPARISON OF A TYPICAL LARGE MANUFACTURER'S CONVERSION COSTS TO ANNUAL EXPENSES, REVENUE, AND OPERATING PROFIT

	Capital conversion cost as a percentage of annual capital expenditures (percent)	Product conversion cost as a percentage of annual R&D expense (percent)	Total conversion cost as a percentage of annual revenue (percent)	Total conversion cost as a percentage of annual EBIT (percent)
Baseline	.....	.....	.....	.....
TSL 1	7	12	0	10
TSL 2	42	30	1	40
TSL 3	167	110	5	154
TSL 4	246	158	8	225
TSL 5	206	220	8	225
TSL 6	337	300	12	344

Table VI.12 and Table VI.13 illustrate that, although the investments required at each TSL can be considered substantial for all companies, the impacts could be greater for a typical small business because of much lower production volumes and a comparable number of product offerings. At higher TSLs, it is more likely that manufacturers of traditional DHE would reduce the number of product lines they offer to keep their conversion costs at manageable levels. At higher TSLs, small manufacturers would face increasingly difficult decisions on

whether to invest the capital required to be able to continue offering a full range of products, cut product lines, consolidate to maintain a large enough combined scale to spread the required conversion costs and operating expenses, or exit the market altogether. Because of the high conversion costs, manufacturers would likely eliminate their lower-volume product lines. Small manufacturers might only be able to afford to selectively upgrade their most popular products and be forced to discontinue lower-volume products because the product development costs that would be required to upgrade all of their existing product lines would be too high.

DOE's product line analysis reveals the potential for small businesses to be disproportionately harmed by the proposed standard levels and higher TSLs. Small traditional direct heating manufacturers have less access to capital than their larger competitor. Larger manufacturers profit from offering a variety of products and have the ability to fund required capital and product conversion costs using cash generated from all products. Unlike large manufacturers, the small manufacturers cannot leverage resources from other departments. With these considerations, it is more likely that the small businesses would have to spend an even greater proportion of their annual R&D and capital expenditures than shown in the industry-wide figures.

In addition, small manufacturers have less buying power than their larger competitor. Traditional DHE is a low-volume industry, which can make it difficult for any manufacturer to take advantage of bulk purchasing power or economies of scale. The two small businesses have approximately half the market share of their large competitor, which puts them at a disadvantage when purchasing components and raw materials. In addition, the large manufacturer has a parent company that manufactures products and equipment other than traditional DHE. This manufacturer's larger scale and additional manufacturing capacity (required for products and equipment other than DHE) also give the company more leverage with its suppliers as it purchases greater volumes of components and raw materials. During the manufacturer interviews, the small businesses commented that to comply with amended energy conservation standards, they would likely need to buy more purchased parts instead of producing most of the final product in-house. Because the large manufacturer has an advantage in purchasing power that would likely allow it to buy purchased parts at lower costs, an amended energy conservation standard that requires more purchased parts may differentially harm the profitability of the small businesses.

Even though there is a potential for small businesses to be negatively impacted by the proposed standards, DOE believes that manufacturers, including the small businesses, would be able to maintain viable number of product offerings at TSL 3, the proposed standard level. A typical small business offers product families in three out of the four product types that would meet or exceed the proposed standard levels in today's NOPR. For example, products are currently available on the market at the proposed standard level for gas wall gravity DHE, which comprise over 60 percent of the traditional DHE market. The proposed standard levels do not require manufacturers, including those that are small, to completely redesign all their product lines. For those product lines that would need to be redesigned, DOE believes that small manufacturers would offer fewer product lines after amended energy conservation standards. However, DOE believes that the proposed standards would allow the small manufacturers to selectively upgrade their existing product lines and maintain viable production volumes after the compliance date of the amended energy conservation standards. DOE seeks comment on the potential impacts of amended standards on the small traditional DHE manufacturers. (See Issue 21 and 22 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

ii. Gas Hearth-Type Direct Heating Equipment

While the three large manufacturers have a larger product offering than the smaller manufacturers, both small and large manufacturers typically offer a wide range of covered gas hearth DHE. During interviews, manufacturers indicated that product lines typically are not based on efficiency. Rather, product lines are groups of gas stoves, gas inserts, or gas fireplaces with similar appearances and shapes that span input ratings to appeal to a range of customers with different heating and aesthetic requirements. A product line is typically built on the same production platform and shares many of the same appearance and optional features. However, because products lines are based on appearance, features, and dimensions, product lines do not necessarily have the same efficiency across all input capacities.

DOE calculated the anticipated capital and product development costs for gas hearth DHE by estimating per-line cost. DOE used certification databases, product catalogs, interviews with manufacturers, and sources of public information to estimate the number of product lines that meet each TSL for every gas hearth DHE manufacturer for which data was available. If a product line contained several products that met different efficiencies at different capacities, DOE assumed that the product line would be redesigned in response to amended energy conservation standards whenever the least-efficient product did not meet the required efficiency level.

To show how small manufacturers would be potentially impacted compared to the large manufacturers, DOE assumed that the entire gas hearth DHE industry was comprised of the 12 manufacturers identified in the market and technology assessment (see chapter 3 of the TSD for more information). Using all available public data, DOE then identified the product lines and the efficiency levels for each product line made by these manufacturers. DOE used this information calculate the product line offerings of a ''typical'' large manufacturer and small manufacturer. Table VI.14 and Table VI.15 show DOE's estimates for the product lines of a typical small and a typical large gas hearth manufacturer.

TABLE VI.14—NUMBER OF PRODUCT LINES OF A TYPICAL SMALL MANUFACTURER

	AFUE (percent)	Number of product lines
Baseline	64	5
TSL 1, 2, and 3	67	3
TSL 4 and 5	72	1
TSL 6	93	0

TABLE VI.15—NUMBER OF PRODUCT LINES OF TYPICAL LARGE MANUFACTURER

	AFUE (percent)	Number of product lines
Baseline	64	8
TSL 1, 2, and 3	67	6
TSL 4 and 5	72	3
TSL 6	93	0

Table VI.14 shows that a typical small manufacturer currently offers nine total product lines: 5 at baseline efficiency (*i.e.,* 64 percent AFUE), 3 at 67 percent AFUE, and 1 at 72 percent AFUE. Table VI.14 suggests that a typical small manufacturer would need to upgrade up to five product lines at TSL 1 through TSL 3, up to eight product lines at TSL 4 and TSL 5, and up to nine at TSL 6. Table VI.15 shows that a typical large manufacturer currently offers 17 total product lines: Eight at the baseline (64 percent AFUE), six at 67 percent AFUE, and three at 72 percent AFUE. Table VI.15 suggests that a typical large manufacturer would upgrade up to eight product lines at TSL 1 through TSL 3, up to 14 product lines at TSL 4 and TSL 5, and up to 17 at TSL 6. However, DOE recognizes that not all manufacturers of gas hearth DHE currently report the efficiency of their products using the DOE test procedure, and as a result they may offer products at other efficiencies. DOE requests comment on its characterization of a typical large and a typical small gas hearth DHE manufacturer. (See Issue 23 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

To calculate the capital and product conversion costs for a typical large and a typical small manufacturer, DOE multiplied its estimate of the per-product-line capital and product conversion costs by the number of product lines a typical large and a typical small manufacturer would need to upgrade at each TSL. As described in section IV.H.2 above, DOE assumed manufacturers would only upgrade fifty percent of their existing product lines that did not meet the required efficiencies at each TSL for gas hearth DHE. Table VI.16 and Table VI.17 show DOE's estimates for the product and capital conversion costs that a typical large manufacturer and a typical small manufacturer would be expected to incur at each TSL.

TABLE VI.16—TOTAL CONVERSION COSTS FOR A TYPICAL SMALL MANUFACTURER OF GAS HEARTH DIRECT HEATING EQUIPMENT

	Capital conversion costs for a typical small manufacturer	Product conversion costs for a typical small manufacturer	Total conversion costs for a typical small manufacturer
Baseline	.....	.....	.....
TSL 1, 2, and 3	$25,000	$66,667	$91,667
TSL 4 and 5	75,000	200,000	275,000
TSL 6	400,000	800,000	1,200,000

TABLE VI.17—TOTAL CONVERSION COSTS FOR A TYPICAL LARGE MANUFACTURER OF GAS HEARTH DIRECT HEATING EQUIPMENT

	Capital conversion costs for a typical large manufacturer	Product conversion costs for a typical large manufacturer	Total conversion costs for a typical large manufacturer
Baseline	.....	.....	.....
TSL 1, 2, and 3	$50,000	$133,333	$183,333
TSL 4 and 5	125,000	333,333	458,333
TSL 6	800,000	1,600,000	2,400,000

Because a typical large manufacturer has significantly higher market shares and a greater number product lines, a large manufacturer would have higher conversion costs on an absolute basis than a typical small manufacturer. However, at every TSL, a typical small business manufacturer could be disproportionately impacted. To show how a much smaller manufacturing scale could harm small business manufacturers as compared to large manufacturers, DOE used the market share of a typical large manufacturer and a typical small manufacturer to estimate the annual revenue, EBIT, R&D expense, and capital expenditures for a typical large and typical small manufacturer. DOE then compared these costs to the required capital and product conversion costs at each TSL for a typical large and typical small manufacturer. Table VI.18 through Table VI.19 show these comparisons.

TABLE VI.18—COMPARISON OF A TYPICAL SMALL GAS HEARTH DIRECT HEATING EQUIPMENT MANUFACTURER'S CONVERSION COSTS TO ANNUAL EXPENSES, REVENUE, AND PROFIT

	Capital conversion cost as a percentage of annual capital expenditures (percent)	Product conversion cost as a percentage of annual R&D expense (percent)	Total conversion cost as a percentage of annual revenue (percent)	Total conversion cost as a percentage of annual EBIT (percent)
Baseline	.....	.....	.....	–
TSL 1, 2, and 3	33.2	141.8	2.9	83.0
TSL 4 and 5	99.7	425.5	8.8	248.9
TSL 6	531.9	1,702.2	38.3	1,086.2

TABLE VI.19—COMPARISON OF A TYPICAL LARGE GAS HEARTH-TYPE DIRECT HEATING EQUIPMENT MANUFACTURER'S CONVERSION COSTS TO ANNUAL EXPENSES, REVENUE, AND PROFIT

	Capital conversion cost as a percentage of annual capital expenditures (percent)	Product conversion cost as a percentage of annual R&D expense (percent)	Total conversion cost as a percentage of annual revenue (percent)	Total conversion cost as a percentage of annual EBIT (percent)
Baseline	.....	.....	.....	.....
TSL 1, 2, and 3	3.2	13.5	0.3	7.9
TSL 4 and 5	7.9	33.8	0.7	19.8
TSL 6	50.7	162.1	3.6	103.4

DOE's product line analysis illustrates that small businesses have the potential to be differentially impacted by any amended energy conservation standard because the small businesses have a disproportionate number of product lines relative to their much smaller scale. For TSLs 4, 5 and 6, amended energy conservation standards could force a typical small business to hire additional engineers, discontinue product lines, or selectively upgrade more popular products with their present limited engineering and product development resources. Because the annual shipments of small manufacturers are several times lower than those of major manufacturers and small manufacturers typically only manufacture gas hearth DHE, small companies have less buying power than their larger competitors. The much larger production volumes of large manufacturers give them more leverage to negotiate lower prices with component and material suppliers. Because these conversion costs are more substantial relative to the size of a typical small business, large manufacturers could take additional market share from small manufacturers at TSL 4 through TSL 6. Because TSLs 4 and 5 require additional plant modifications, the added conversion costs make it more likely that small manufacturers could discontinue some of their least popular product lines at TSL 4 and TSL 5. At TSL 6, the substantial conversion costs could cause even a large manufacturer to potentially decide to offer fewer product lines, to bring down the significant product conversion costs. Consequently, it is increasingly likely that higher conversion costs could cause many small businesses to exit the market or become severely constrained with the number of product lines offered at TSLs 4, 5, and 6.

At TSLs 1 through 3, a typical small manufacturer would not face prohibitively large conversion costs to meet the amended energy conservation standards. At these TSLs, the amended energy conservation standards could be met with products that use electric ignition, which is not particularly capital intensive. These changes would also not require significant investments in product development costs by small businesses. The most substantial portion of the conversion costs at TSLs 1 through 3 would be testing, recertifying, and remarketing all the existing product lines that currently meet the baseline efficiencies. In addition, at TSL 1 through TSL 3, it is likely that small manufacturers would not discontinue a large number of product lines to lower product and capital conversion costs because these costs are not substantial. A typical small manufacturer has multiple product lines that meet and exceed the required efficiencies at TSL 3. Also, the proposed standard levels do not require manufacturers to substantially redesign product lines that fall below TSL 3.

DOE's analysis indicates that a typical small manufacturer of gas hearth DHE already offers multiple product lines that meet and exceed the required efficiencies at TSL 3, the proposed energy conservation standard. In addition, the proposed standard levels do not require substantial redesign to existing product lines that do not meet the proposed TSL 3. Because most of the product lines that do not meet the proposed TSL could be upgraded with relatively minor changes, DOE believes that manufacturers, including the small businesses, will be able to maintain a viable number of product offerings at the proposed standard level. DOE seeks comment on the potential impacts on the small gas hearth DHE manufacturers. (See Issue 24 under ''Issues on Which DOE Seeks Comment'' in section VII.E of this NOPR.)

e. Duplication, Overlap, and Conflict With Other Rules and Regulations

DOE is not aware of any rules or regulations that duplicate, overlap, or conflict with the rule being considered today.

f. Significant Alternatives to the Proposed Rule

The discussion above analyzes impacts on small businesses that would result from the other TSLs DOE considered. Though TSLs lower than the proposed TSLs are expected to reduce the impacts on small entities, DOE is required by EPCA to establish standards that achieve the maximum

improvement in energy efficiency that are technically feasible and economically justified, and result in a significant conservation of energy. Thus DOE rejected the lower TSLs.

In addition to the other TSLs being considered, the NOPR TSD includes a regulatory impact analysis. For DHE, this report discusses the following policy alternatives: (1) No standard, (2) consumer rebates, (3) consumer tax credits, (4) manufacturer tax credits, and (5) early replacement. While these alternatives may mitigate the economic impacts on small entities compared to the proposed standards, the energy savings of these regulatory alternatives are at least four times smaller than those expected from the proposed standard levels. Thus, DOE rejected these alternatives and is proposing the standards set forth in this rulemaking.

DOE continues to seek input from businesses that would be affected by this rulemaking and will consider comments received in the development of any final rule.

C. Review Under the Paperwork Reduction Act of 1995

This rule contains a collection-of-information requirement subject to the Paperwork Reduction Act (PRA) which has been approved by OMB under control number 1910–1400. Public reporting burden for compliance reporting for energy and water conservation standards is estimated to average 30 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate, or any other aspect of this data collection, including suggestions for reducing the burden, to DOE (see **ADDRESSES**) and by e-mail to *Christine_J._Kymn@omb.eop.gov.*

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

D. Review Under the National Environmental Policy Act of 1969

DOE has prepared a draft environmental assessment (EA) of the impacts of the proposed rule, pursuant to the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), the regulations of the Council on Environmental Quality (40 CFR parts 1500–1508), and DOE's regulations for compliance with the National Environmental Policy Act (10 CFR part 1021). This assessment includes an examination of the potential effects of emission reductions likely to result from the rule in the context of global climate change, as well as other types of environmental impacts. The draft EA has been incorporated into the TSD. Before issuing a final rule for the three type of heating products, DOE will consider public comments and, as appropriate, determine whether to issue a finding of no significant impact (FONSI) as part of a final EA or to prepare an environmental impact statement (EIS) for this rulemaking.

E. Review Under Executive Order 13132

Executive Order 13132, ''Federalism,'' 64 FR 43255 (August 4, 1999) imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have Federalism implications. The Executive Order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive Order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have Federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. DOE has examined today's proposed rule and has determined that it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the products that are the subject of today's proposed rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297(d)) No further action is required by Executive Order 13132.

F. Review Under Executive Order 12988

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, ''Civil Justice Reform'' (61 FR 4729 (Feb. 7, 1996)) imposes on Executive agencies the general duty to adhere to the following requirements: (1) Eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; and (3) provide a clear legal standard for affected conduct rather than a general standard and promote simplification and burden reduction. Section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) Clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in section 3(a) and section 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this proposed rule meets the relevant standards of Executive Order 12988.

G. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) (UMRA) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. For a proposed regulatory action likely to result in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of $100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects of the rule on the national economy. (2 U.S.C. 1532(a),(b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed ''significant intergovernmental mandate,'' and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA (62 FR 12820) (also available at *http://*

www.gc.doe.gov). Although today's proposed rule does not contain a Federal intergovernmental mandate, it may impose expenditures of $100 million or more on the private sector.

Today's proposed rule would likely result in a final rule that could impose expenditures of $100 million or more between 2013 and 2045 in the residential sector. Therefore, DOE must publish a written statement assessing the costs, benefits, and other effects of the rule on the national economy. Section 205 of UMRA also requires DOE to identify and consider a reasonable number of regulatory alternatives before promulgating a rule for which UMRA requires such a written statement. DOE must select from those alternatives the most cost-effective and least burdensome alternative that achieves the objectives of the rule, unless DOE publishes an explanation for doing otherwise or the selection of such an alternative is inconsistent with law.

As required by EPCA (42 U.S.C. 6295(o)), today's proposed energy conservation standards for the three types of heating products would achieve the maximum improvement in energy efficiency that DOE has determined to be both technologically feasible and economically justified. DOE may not select a regulatory alternative that does not meet this statutory standard. A full discussion of the alternatives considered by DOE is presented in the ''Regulatory Impact Analysis'' section of the TSD for this proposed rule. Also, section 202(c) of UMRA authorizes an agency to prepare the written statement required by UMRA in conjunction with or as part of any other statement or analysis that accompanies the proposed rule. (2 U.S.C. 1532(c)) The TSD, preamble, and regulatory impact analysis for today's proposed rule contain a full discussion of the rule's costs, benefits, and other effects on the national economy, and, therefore satisfy UMRA's written statement requirement.

H. Review Under the Treasury and General Government Appropriations Act, 1999

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. 105–277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This rule would not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

I. Review Under Executive Order 12630

DOE has determined under Executive Order 12630, ''Governmental Actions and Interference with Constitutionally Protected Property Rights,'' 53 FR 8859 (March 18, 1988), that this regulation would not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

J. Review Under the Treasury and General Government Appropriations Act, 2001

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE's guidelines were published at 67 FR 62446 (Oct. 7, 2002). DOE has reviewed today's notice under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. Review Under Executive Order 13211

Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use,'' 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OIRA at OMB, a Statement of Energy Effects for any proposed significant energy action. A ''significant energy action'' is defined as any action by an agency that promulgates or is expected to lead to promulgation of a final rule, and that: (1) Is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (3) is designated by the Administrator of OIRA as a significant energy action. For any proposed significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

DOE has tentatively concluded that today's regulatory action, which sets forth energy conservation standards for three types of heating products, is not a ''significant energy action'' because the proposed standards are not likely to have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as such by the Administrator at OIRA. Therefore, DOE has not prepared a Statement of Energy Effects on the proposed rule.

L. Review Under the Information Quality Bulletin for Peer Review

On December 16, 2004, OMB, in consultation with the Office of Science and Technology (OSTP), issued its ''Final Information Quality Bulletin for Peer Review'' (the Bulletin). 70 FR 2664 (Jan. 14, 2005). The Bulletin establishes that certain scientific information shall be peer reviewed by qualified specialists before it is disseminated by the Federal government, including influential scientific information related to agency regulatory actions. The purpose of the Bulletin is to enhance the quality and credibility of the government's scientific information. Under the Bulletin, the energy conservation standards rulemaking analyses are ''influential scientific information,'' which the Bulletin defines as ''scientific information the agency reasonably can determine will have, or does have, a clear and substantial impact on important public policies or private sector decisions.'' 70 FR 2664, 2667 (Jan. 14, 2005).

In response to OMB's Bulletin, DOE conducted formal in-progress peer reviews of the energy conservation standards development process and analyses, and has prepared a Peer Review Report on the energy conservation standards rulemaking analyses. Generation of this report involved a rigorous, formal, and documented evaluation using objective criteria and qualified and independent reviewers to make a judgment as to the technical/scientific/business merit, the actual or anticipated results, and the productivity and management effectiveness of programs and/or projects. The ''Energy Conservation Standards Rulemaking Peer Review Report'' dated February 2007 has been disseminated and is available at the following Web site: *http://www1.eere.energy.gov/buildings/appliance_standards/peer_review.htm.*

VII. Public Participation

A. Public Meeting

The time, date and location of the public meeting are listed in the **DATES** and **ADDRESSES** sections at the beginning of this document. To attend the public meeting, please notify Ms. Brenda Edwards at (202) 586–2945 or *Brenda.Edwards@ee.doe.gov*. As explained in the **ADDRESSES** section, foreign nationals visiting DOE Headquarters are subject to advance security screening procedures.

B. Procedure for Submitting Requests To Speak

Any person who has an interest in today's notice, or who is a representative of a group or class of persons that has an interest in these issues, may request an opportunity to make an oral presentation. Such persons may hand-deliver requests to speak, along with a computer diskette or CD in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format, to the address shown in the **ADDRESSES** section at the beginning of this NOPR between the hours of 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Requests may also be sent by mail, or by e-mail to: *Brenda.Edwards@ee.doe.gov*.

Persons requesting an opportunity to speak should briefly describe the nature of their interest in this rulemaking and provide a telephone number for contact. DOE requests persons scheduled to make an oral presentation to submit an advance copy of their statements at least one week before the public meeting. At its discretion, DOE may permit any person who cannot supply an advance copy of their statement to participate, if that person has made advance alternative arrangements with the Building Technologies Program. The request to give an oral presentation should ask for such alternative arrangements.

C. Conduct of Public Meeting

DOE will designate a DOE official to preside at the public meeting and may also use a professional facilitator to aid discussion. The meeting will not be a judicial or evidentiary-type public hearing, but DOE will conduct it in accordance with section 336 of EPCA. (42 U.S.C. 6306) A court reporter will be present to record the proceedings and to prepare a transcript. DOE reserves the right to schedule the order of presentations and to establish the procedures governing the conduct of the public meeting. After the public meeting, interested parties may submit further comments on the proceedings as well as on any aspect of the rulemaking until the end of the comment period.

The public meeting will be conducted in an informal, conference style. DOE will present summaries of comments received before the public meeting, allow time for presentations by participants, and encourage all interested parties to share their views on issues affecting this rulemaking. Each participant will be allowed to make a prepared general statement (within time limits determined by DOE), before the discussion of specific topics. DOE will permit other participants to comment briefly on any general statements.

At the end of all prepared statements on a topic, DOE will permit participants to clarify their statements briefly and comment on statements made by others. Participants should be prepared to answer questions from DOE and from other participants concerning these issues. DOE representatives may also ask questions of participants concerning other matters relevant to this rulemaking. The official conducting the public meeting will accept additional comments or questions from those attending, as time permits. The presiding official will announce any further procedural rules or modification of the above procedures that may be needed for the proper conduct of the public meeting.

DOE will make the entire record of this proposed rulemaking, including the transcript from the public meeting, available for inspection at the U.S. Department of Energy, Resource Room of the Building Technologies Program, 950 L'Enfant Plaza, SW., Washington, DC 20024, (202) 586–2945, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

D. Submission of Comments

DOE will accept comments, data, and other information on the proposed rule before or after the public meeting, but no later than the date provided at the beginning of this NOPR. Comments, data, and other information submitted to DOE's e-mail address for this rulemaking should be provided in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format. Interested parties should avoid the use of special characters or any form of encryption and, wherever possible, comments should carry the electronic signature of the author. Comments, data, and information submitted to DOE via mail or hand delivery/courier should include one signed original paper copy. No telefacsimiles (faxes) will be accepted.

According to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit two copies: one copy of the document including all the information believed to be confidential, and one copy of the document with the information believed to be confidential deleted. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

Factors of interest to DOE when evaluating requests to treat submitted information as confidential include: (1) A description of the items; (2) whether and why such items are customarily treated as confidential within the industry; (3) whether the information is generally known by or available from other sources; (4) whether the information has previously been made available to others without obligation concerning its confidentiality; (5) an explanation of the competitive injury to the submitting person which would result from public disclosure; (6) when such information might lose its confidential character due to the passage of time; and (7) why disclosure of the information would be contrary to the public interest.

E. Issues on Which DOE Seeks Comment

DOE is particularly interested in receiving comments and views of interested parties concerning the following issues:

1. The max-tech efficiency levels identified for the analyses, including whether the efficiency levels identified by DOE can be achieved using the technologies screened-in during the screening analysis (see section IV.B), and whether higher efficiencies are achievable using technologies that were screened-in during the screening analysis.

2. The potential burdens to manufacturers of hearth-type DHE as a result of the testing, certification, reporting, and enforcement provisions.

3. EPCA's efficiency descriptor requirements in any potential test procedure revisions for electric pool heaters.

4. DOE's proposed definition for vented hearth heaters.

5. DOE's product classes for water heaters. In particular, DOE is seeking comment about the need for a separate product class for low-boy water heaters.

6. DOE's approach for analyzing ultra-low NO_X gas-fired storage water heaters and the need for a separate product class.

7. DOE's approach to developing the energy efficiency equations, the appropriate slope of energy efficiency equations at each efficiency level analyzed, and the appropriate storage volumes for changing the slope of the line. DOE is also interested in any alternatives to the energy efficiency equations that DOE should consider for the final rule.

8. The need for a separate product class for heat pump water heaters. Specifically, DOE is interested in receiving comments on whether a heat pump water heater can be used as a direct replacement for an electric resistance water heater, and the types and frequency of instances a heat pump water heater cannot be used as a direct

replacement for an electric resistance water heater.

9. DOE's proposed product classes for the four existing types of DHE.

10. DOE's proposed product class divisions for gas hearth DHE.

11. The manufacturability of heat pump water heaters and the capability of manufacturers to ramp up production of heat pump water heaters. Specifically, DOE is seeking comment on how long it would take and the magnitude of the costs for manufacturers to convert all product lines to heat pump water heaters if it were required by an amended energy conservation standard. In addition, DOE is seeking comment about the length of time required to retrain installers and servicers of water heaters for the installation and servicing of heat pump water heaters.

12. DOE's estimated manufacturer production costs for storage water heaters at storage volumes outside of the representative volume.

13. DOE's analysis of installation costs for water heaters. DOE is particularly interested in comments on its analysis of installation costs for heat pump water heaters.

14. DOE's analysis of repair and maintenance costs for heat pump water heaters.

15. DOE's approach for analyzing fuel switching that may result from the proposed standards on water heaters and the other heating products. In particular, DOE requests comments on its general approach, which does not involve price elasticities; its analysis of switching to gas-fired storage water heaters in the case of a standard that effectively requires an electric heat pump water heater; its conclusion that the proposed standards would not induce switching from a gas storage water heater to an electric storage water heater; and its conclusion that the proposed standards would not induce switching for gas-fired instantaneous water heaters, DHE, and pool heaters.

16. DOE's consideration of TSL 6 in the final rule for residential water heaters and the associated issues DOE has identified surrounding heat pump water heaters.

17. DOE's consideration of TSL 5 in the final rule for residential water heaters and the associated issues DOE has identified surrounding standards that effectively require different technologies for different subsets of products.

18. The appropriateness of TSL 4 for residential pool heaters in light of the negative life cycle costs for a majority of consumers. In addition, DOE's consideration of other TSLs, including TSL 3, as an alternative for the final standard level.

19. The impacts of the proposed amended energy conservation standards on small manufacturers of residential water heaters.

20. The impacts of the proposed amended energy conservation standards on small manufacturers of gas-fired residential pool heaters.

21. The impacts of the proposed amended energy conservation standards on small manufacturers of traditional DHE. DOE is interested in specific information regarding the potential for small manufacturers of traditional DHE to discontinue particular product lines as a result of the proposed standard, as well as the potential economic effect discontinuing those particular product lines would have on small manufacturers of traditional DHE.

22. Alternatives to the proposed amended energy conservation standards for traditional DHE. Specifically, DOE is interested in information regarding alternatives that could provide significant cost-savings for small manufacturers while meeting DOE's energy conservation goals.

23. DOE's characterization of typical small and large gas hearth DHE manufacturers.

24. The impacts of the proposed amended energy conservation standards on small manufacturers of gas hearth DHE.

VIII. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of today's proposed rule.

List of Subjects in 10 CFR Part 430

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Intergovernmental relations, Reporting and recordkeeping requirements, and Small businesses.

Issued in Washington, DC, on November 23, 2009.

Cathy Zoi,

Assistant Secretary, Energy Efficiency and Renewable Energy.

For the reasons set forth in the preamble, DOE proposes to amend chapter II, subchapter D, of title 10 of the Code of Federal Regulations, as set forth below:

PART 430—ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

1. The authority for part 430 continues to read as follows:

Authority: 42 U.S.C. 6291–6309; 28 U.S.C. 2461 note.

2. In § 430.2, add the definitions ''Direct heating equipment'' and ''Vented hearth heater,'' in alphabetical order to read as follows:

§ 430.2 Definitions.

* * * * *

Direct heating equipment means vented home heating equipment and unvented home heating equipment.

* * * * *

Vented hearth heater means a vented, freestanding, recessed, zero clearance fireplace heater, a gas fireplace insert or a gas-stove, which simulates a solid fuel fireplace and is designed to furnish warm air, without ducts to the space in which it is installed.

* * * * *

3. In § 430.32 revised paragraphs (d), (i), (k) to read as follows:

§ 430.32 Energy and water conservation standards and their effective dates.

* * * * *

(d) *Water heaters.* The energy factor of water heaters shall not be less than the following for products manufactured on or after the indicated dates.

Product class	Energy factor as of January 20, 2004	Energy factor as of [INSERT DATE 5 YEARS AFTER DATE OF PUBLICATION OF THE FINAL RULE]
Gas-fired Water Heater	0.67 − (0.0019 × Rated Storage Volume in gallons).	For tanks with Rated Storage Volume at or below 60 gallons: 0.675 − (0.0012 × Rated Storage Volume in gallons); For tanks with Rated Storage Volume above 60 gallons: 0.717 − (0.0019 × Rated Storage Volume in gallons).
Oil-fired Water Heater	0.59 − (0.0019 × Rated Storage Volume in gallons).	0.68 − (0.0019 × Rated Storage Volume in gallons).
Electric Water Heater	0.97 − (0.00132 × Rated Storage Volume in gallons).	For tanks with Rated Storage Volume at or below 80 gallons: 0.96 − (0.0003 × Rated Storage Volume in gallons);

Product class	Energy factor as of (percent)January 20, 2004	Energy factor as of [INSERT DATE 5 YEARS AFTER DATE OF PUBLICATION OF THE FINAL RULE]
		For tanks with Rated Storage Volume above 80 gallons: $1.088 - (0.0019 \times$ Rated Storage Volume in gallons).
Tabletop Water Heater	$0.93 - (0.00132 \times$ Rated Storage Volume in gallons).	$0.93 - (0.00132 \times$ Rated Storage Volume in gallons).
Instantaneous Gas-fired Water Heater.	$0.62 - (0.0019 \times$ Rated Storage Volume in gallons).	$0.82 - (0.0019 \times$ Rated Storage Volume in gallons).
Instantaneous Electric Water Heater.	$0.93 - (0.00132 \times$ Rated Storage Volume in gallons).	$0.93 - (0.00132 \times$ Rated Storage Volume in gallons).

Note: The Rated Storage Volume equals the water storage capacity of a water heater, in gallons, as specified by the manufacturer.

* * * * *

(i) *Direct heating equipment.* (1) Direct heating equipment manufactured on or after January 1, 1990 and before [INSERT DATE 3 YEARS AFTER DATE OF PUBLICATION OF THE FINAL RULE], shall have an annual fuel utilization efficiency no less than:

Product class	Annual fuel utilization efficiency, Jan. 1, 1990 (percent)
1. Gas wall fan type up to 42,000 Btu/h	73
2. Gas wall fan type over 42,000 Btu/h	74
3. Gas wall gravity type up to 10,000 Btu/h	59
4. Gas wall gravity type over 10,000 Btu/h up to 12, 000 Btu/h	60
5. Gas wall gravity type over 12,000 Btu/h up to 15,000 Btu/h	61
6. Gas wall gravity type over 15,000 Btu/h up to 19,000 Btu/h	62
7. Gas wall gravity type over 19,000 Btu/h and up to 27,000 Btu/h	63
8. Gas wall gravity type over 27,000 Btu/h and up to 46,000 Btu/h	64
9. Gas wall gravity type over 46,000 Btu/h	65
10. Gas floor up to 37,000 Btu/h	56
11. Gas floor over 37,000 Btu/h	57
12. Gas room up to 18,000 Btu/h	57
13. Gas room over 18,000 Btu/h up to 20,000 Btu/h	58
14. Gas room over 20,000 Btu/h up to 27,000 Btu/h	63
15. Gas room over 27,000 Btu/h up to 46,000 Btu/h	64
16. Gas room over 46,000 Btu/h	65

(2) Direct heating equipment manufactured on or after [INSERT DATE 3 YEARS AFTER DATE OF PUBLICATION OF THE FINAL RULE], shall have an annual fuel utilization efficiency no less than:

Product class	Annual fuel utilization efficiency, [INSERT DATE 3 YEARS AFTER DATE OF PUBLICATION OF THE FINAL RULE] (percent)
1. Gas wall fan type up to 42,000 Btu/h	76
2. Gas wall fan type over 42,000 Btu/h	77
3. Gas wall gravity type up to 27,000 Btu/h	70
4. Gas wall gravity type over 27,000 Btu/h up to 46,000 Btu/h	71
5. Gas wall gravity type over 46,000 Btu/h	72
6. Gas floor up to 37,000 Btu/h	57
7. Gas floor over 37,000 Btu/h	58
8. Gas room up to 20,000 Btu/h	62
9. Gas room over 20,000 Btu/h up to 27,000 Btu/h	67
10. Gas room over 27,000 Btu/h up to 46,000 Btu/h	68
11. Gas room over 46,000 Btu/h	69
12. Gas hearth up to 20,000 Btu/h	61
13. Gas hearth over 20,000 Btu/h and up to 27,000 Btu/h	66
14. Gas hearth over 27,000 Btu/h and up to 46,000 Btu/h	67
15. Gas hearth over 46,000 Btu/h	68

* * * * *

(k) *Pool heaters.* (1) Gas-fired pool heaters manufactured on or after January 1, 1990 and before [INSERT DATE 3 YEARS AFTER DATE OF PUBLICATION OF THE FINAL RULE], shall have a thermal efficiency not less than 78%.

(2) Gas-fired pool heaters manufactured on or after [INSERT DATE 3 YEARS AFTER DATE OF PUBLCIATION OF THE FINAL RULE], shall have a thermal efficiency not less than 84%.

* * * * *

[FR Doc. E9–28774 Filed 12–10–09; 8:45 am]

BILLING CODE 6450–01–P

Federal Register

Friday,

December 11, 2009

Part III

Department of Commerce

Bureau of Industry and Security

15 CFR Parts 740, 742, 743, et al.

Wassenaar Arrangement 2008 Plenary Agreements Implementation: Categories 1, 2, 3, 4, 5 Parts I and II, 6, 7, 8 and 9 of the Commerce Control List, Definitions, Reports; Final Rule

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

15 CFR Parts 740, 742, 743, 772, and 774

[Docket No. 0908041218–91220–01]

RIN 0694 AE58

Wassenaar Arrangement 2008 Plenary Agreements Implementation: Categories 1, 2, 3, 4, 5 Parts I and II, 6, 7, 8 and 9 of the Commerce Control List, Definitions, Reports

AGENCY: Bureau of Industry and Security, Commerce.

ACTION: Final rule.

SUMMARY: The Bureau of Industry and Security (BIS) maintains the Commerce Control List (CCL), which identifies items subject to Department of Commerce export controls. This final rule revises the Export Administration Regulations (EAR) to implement changes made to the Wassenaar Arrangement's List of Dual Use Goods and Technologies (Wassenaar List) maintained and agreed to by governments participating in the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual Use Goods and Technologies (Wassenaar Arrangement, or WA). The Wassenaar Arrangement advocates implementation of effective export controls on strategic items with the objective of improving regional and international security and stability. To harmonize with the changes to the Wassenaar List, this rule revises the EAR by amending certain entries that are controlled for national security reasons in Categories 1, 2, 3, 4, 5 Part I (telecommunications), 5 Part II (information security), 6, 7, 8, and 9; adding new entries to the CCL, revising reporting requirements and adding and amending EAR Definitions.

The purpose of this final rule is to revise the CCL and definitions of terms used in the EAR to implement Wassenaar List revisions that were agreed upon in the December 2008 Wassenaar Arrangement Plenary Meeting.

This rule also adds or expands unilateral U.S. export controls and national security export controls on certain items to make them consistent with the amendments made to implement the Wassenaar Arrangement's decisions.

The Wassenaar Agreements that pertain to ECCNs 6A002, 6A003, and all related ECCNs will be implemented in a separate rule, because of the sensitivity of the items and complexity of procedures and controls for these items.

DATES: *Effective Date:* This rule is effective December 11, 2009.

FOR FURTHER INFORMATION CONTACT: For questions of a general nature contact Sharron Cook, Office of Exporter Services, Bureau of Industry and Security, U.S. Department of Commerce at (202) 482 2440 or E-mail: *scook@bis.doc.gov.*

For questions of a technical nature contact:

Category 1: Bob Teer, 202 482 4749.
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Category 5 Part 2: Michael Pender, 202 482 2458.
Category 6: Chris Costanzo, 202 482 0718 (optics), John Varesi, 202 482 1114 (sensors & cameras) and Mark Jaso 202 482 0987 (lasers).
Category 7: Daniel Squire 202 482 3710.
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Category 9: Gene Christensen 202 482 2984.

ADDRESSES: Comments regarding the collections of information associated with this rule, including suggestions for reducing the burden, should be sent to OMB Desk Officer, New Executive Office Building, Washington, DC 20503 Attention: Jasmeet Seehra, OMB Desk Officer, by e-mail at *jseehra@omb.eop.gov* or by fax to (202) 395–7285; and to the Office of Administration, Bureau of Industry and Security, Department of Commerce, 14th and Pennsylvania Avenue, NW., Room 6622, Washington, DC 20230.

SUPPLEMENTARY INFORMATION:

Background

In July 1996, the United States and thirty-three other countries gave final approval to the establishment of a new multilateral export control arrangement called the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual Use Goods and Technologies (Wassenaar Arrangement or WA). The Wassenaar Arrangement contributes to regional and international security and stability by promoting transparency and greater responsibility in transfers of conventional arms and dual use goods and technologies, thus preventing destabilizing accumulations of such items. Participating states committed to exchange information on exports of dual use goods and technologies to non-participating states for the purposes of enhancing transparency and assisting in developing a common understanding of the risks associated with the transfers of these items.

Expanded or New Export Controls

A detailed description may be found below of all revisions to Export Control Classification Numbers (ECCNs) that have expanded or new export controls.

This rule imposes new or expands National Security (NS) Column 1 controls. This rule imposes a license requirement pursuant to section 742.4(a) of the EAR for exports and reexports to all destinations, except Canada, of certain commodities (and related software and technology) described in ECCN 5A002.a.7. This rule also imposes such a license requirement for certain software and technology controlled under ECCNs 5E001.c.6, .d, and .e, and 6D003.c. These destinations have an ''X'' in NS column 1 of the Commerce Country Chart of Supplement No. 1 to Part 738. The purpose of the controls is to ensure that these items do not make a contribution to the military potential of any other country or combination of countries that would prove detrimental to the national security of the United States. For designated terrorism supporting countries or embargoed countries, the applicable licensing policies are found in Parts 742 and 746 of the EAR, and in Supplement No. 1 to Part 736 of the EAR for Syria.

This rule imposes new or expands NS Column 2 controls. This rule imposes a license requirement under section 742.4(a) of the EAR for exports and reexports of commodities (and related software and technology) described in ECCNs 1A004.d, 1A008, 3A001.b.10 and .h, 5A001.h, 6A001.c, and 6A008.j.3 to destinations other than Country Group A:1, cooperating countries (*see* Supplement No. 1 to Part 740 of the EAR), Bulgaria, Czech Republic, Estonia, Hungary, Iceland, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia. This NS column 2 license requirement applies to destinations that have an ''X'' indicated in NS column 2 on the Commerce Country Chart of Supplement No. 1 to Part 738 of the EAR. The purpose of the control is to ensure that these items do not make a contribution to the military potential of countries in Country Group D:1 that would prove detrimental to the national security of the United States. For designated terrorism supporting countries or embargoed countries, the applicable licensing policies are found in Parts 742 and 746 of the EAR, and Supplement No. 1 to Part 736 of the EAR for Syria.

The licensing policy for national security controlled items exported or

reexported to any country except a country in Country Group D:1 (*see* Supplement No. 1 to Part 740 of the EAR) is to approve license applications unless there is a significant risk that the items will be diverted to a country in Country Group D:1. The general policy for exports and reexports of items to Country Group D:1 is to approve license applications when BIS determines, on a case by case basis, that the items are for civilian use or would otherwise not make a significant contribution to the military potential of the country of destination that would prove detrimental to the national security of the United States.

This rule imposes new or expands anti-terrorism (AT) controls. This rule imposes a unilateral U.S. license requirement to export and reexport commodities (and related software and technology) controlled under ECCNs 1A004.d, 1A008, 3A001.b.10 and .h, 5A001.h, 5A002.a.7, 6A001.c, and 6A008.j.3 for AT reasons to Cuba, Iran, North Korea, Sudan and Syria, in addition to the national security controls imposed to implement the Wassenaar Arrangement's decisions.

This rule also imposes such a license requirement for certain software and technology controlled under ECCNs 5E001.c.6, .d, and .e, and 6D003.c. These unilateral export controls are necessary because under Section 6(j) of the Export Administration Act of 1979 a license is required for items that could make a significant contribution to the military potential of such country or that could enhance the ability of such country to support acts of international terrorism. There is a general policy of denial for applications to export or reexport to terrorism supporting countries, as set forth in Part 742 of the EAR. In addition, certain of these countries are also subject to embargoes, as set forth in Part 746 of the EAR and Supplement No. 1 to Part 736 of the EAR for Syria. A license is also required for the export and reexport of these items to specially designated terrorists and foreign terrorist organizations, as set forth in Part 744 of the EAR; license applications to these parties are reviewed under a general policy of denial.

All expanded foreign policy controls will be reflected in the Annual Foreign Policy report BIS sends to Congress.

Task Force on Editorial Issues (TFEI)

The Wassenaar Arrangement Task Force on Editorial Issues (TFEI) made revisions, editorial in nature, to clarify or correct control text or remove extraneous text. The TFEI revisions (over 2,000) were agreed upon by the WA in December 2007. This rule implements only those TFEI revisions that coincide with the revisions to ECCNs affected by the 2008 WA agreements and the 2007 WA agreements to Category 6. Other TFEI revisions will be implemented in a separate rule.

Revisions to the Commerce Control List

This rule revises a number of entries on the Commerce Control List (CCL) to implement the December 2008 agreed revisions to the Wassenaar List of Dual Use Goods and Technologies. This rule also revises language to provide a complete or more accurate description of controls in certain ECCNs. A description of the specific amendments to the CCL pursuant to the December 2008 Wassenaar Agreement is provided below. There is one newly added ECCN—1A008, as described below. As described below, the amendments apply to ECCNs 1A001, 1A002, 1A003, 1A004, 1A007, 1A008, 1B001, 1B003, 1C008 1C010, 1D003, 1E001, 1E002, 2A983, 3A001, 3A002, 3B001, 4D001, 4D003, 4E001, 5A001, 5B001, 5D001, 5E001, 5A002, 5B002, 5D002, 5E002, 6A001, 6A004, 6A005, 6A006, 6A008, 6A996, 6D003, 6E993, 7A003, 8A001, 8A002, and 9A012.

Category 1 Special Materials and Related Equipment, Chemicals, ''Microorganisms,'' and Toxins

This rule revises the name of the Category 1 from ''Materials, Chemicals, ''Microorganisms,'' and Toxins'' to read ''Special Materials and Related Equipment, Chemicals, ''Microorganisms,'' and Toxins'' to more clearly describe the scope of items within this category as it has evolved over recent years (e.g., addition of explosive related items).

ECCN 1A001 is amended by:

a. Adding two commas to 1A001.a and 1A001.b, as part of the TFEI revisions to clarify the meaning of these paragraphs; and

b. Modifying the format of paragraph 1A001.c to clarify that the items must contain both criteria. This change was made as part of the TFEI changes.

ECCN 1A002 is amended as follows:

a. Removing the redundant Note after 1A002.a, which also appeared after 1A002.b.2 to harmonize with the Wassenaar Arrangement's List;

b. Replacing the word ''with'' with the phrase ''having all of the following'' to clarify the meaning of 1A002.b.1. This change was made as part of the TFEI changes;

c. Moving or adding three Notes after 1A002.b.2 to clarify that all three apply to the entire entry for ECCN 1A002. The modifications are: Moving the existing Note concerning the repair of ''civil aircraft'' so that it appears as Note 1; moving the existing Note about civilian applications to Note 2; and adding Note 3 to release certain finished or semi-finished items from 1A002 control because these items do not have a direct influence on development, production or use on military relevant equipment; and

d. Removing Technical Notes 1 and 2 that provided definitions for 'specific modulus' and 'specific tensile strength' because these terms are global definitions used in multiple ECCNs and are found in Part 772 of the EAR.

ECCN 1A003 is amended by:

a. Revising the Heading to correct the spelling of ''polyimides'' and to clarify that non-fusible aromatic polyimide products in film, sheet, tape or ribbon form with certain characteristics are appropriately controlled in ECCN 1A003, because a clarification Note was approved by Wassenaar in 2006 that identified the forms of non-fluorinated polymeric substances controlled by 1C008.a to include liquid or solids in the form of resin, powder, pellet, film, sheet, tape, or ribbon. It was not the intent, however, to override the existing Note in 1C008.a for non-fusible forms.

a.1. Deleting the word ''characteristics'' from the Heading as part of the TFEI revisions.

b. Revising the Related Controls to add a reference to 1C008.a.3 for ''fusible'' aromatic polyimides in any form; and

c. Replacing ''With a'' with ''A'' as a TFEI format change.

ECCN 1A004 is amended, as follows:

a. Adding two commas to the Heading to clarify the meaning of the text, as part of the TFEI revisions.

b. Revising the License Requirement section to add RS Column 2 controls for 1A004.d to keep the same controls that were in ECCN 2A983.b, which are necessary because of the military utility of these commodities.

b.1. Adding single quotation marks around the term 'adapted for use in war' in related definitions and in 1A004.a, .b and .c and the term 'riot control agents' in the related definitions section and in 1A004.a.4.

b.2. Adding a greek alpha symbol in front of ''Bromobenzeneacetonitrile'' in 1A004.a.4.a and adding a greek omega symbol in front of ''chloroacetophenone'' in 1A004.a.4.c to conform to Wassenaar text.

c. Adding a new paragraph 1A004.d to control electronic equipment designed for automatically detecting or identifying the presence of ''explosives'' (as listed in the annex at the end of

Category 1) residues and utilizing 'trace detection' techniques (*e.g.,* surface acoustic wave, ion mobility spectrometry, differential mobility spectrometry, mass spectrometry). These new controls are added for this equipment to prevent potential terrorists from discovering how to defeat the devices and ensure they are used by properly vetted organizations.

d. Adding a new Technical Note to define 'trace detection'.

e. Adding two new Notes to indicate that 1A004.d does not control equipment specially designed for laboratory use or non-contact walk-through security portals.

f. Revising paragraph b of the existing decontrol Note to clarify that 1A004 does not control equipment limited by design or function to protect against hazards specific to residential safety.

ECCN 1A007 is amended by:

a. Removing the License Requirement Note in order to conform to the Wassenaar List; and

b. Removing the last sentence in Technical Note 2, because it is redundant to text already included in the Technical Note.

ECCN 1A008 is added to control (explosive) charges, devices and components for national security reasons. The addition is necessary to make these items controlled by all participating states of WA, because of their utility in conventional weapons. The United States and others have unilaterally controlled these items for several years and there is agreement by the WA to broaden control of terrorist related items, such as these. Most of these items were controlled under ECCN 1C018, as well as under the International Traffic in Arms Regulations (ITAR) by the Directorate of Defense Trade Control (DDTC) of the Department of State. Now these items will be controlled for NS:2, AT:1, and UN (Iraq, North Korea and Rwanda) reasons under ECCN 1A008. Because of the creation of this new ECCN 1A008, this rule makes corresponding changes to ECCN 1C018 (deletion of 1C018.a, .b, and .i). A reference to ECCNs 1C018 and 1C992 is included in the Related Control paragraph of ECCN 1A008, and a reference to 1A008 is added to the Related Controls paragraph of 1C018. In addition, Related Control notes concerning State Department jurisdiction that were in 1C018 are also added to 1A008 when appropriate.

ECCN 1B001 is amended by revising the phrase ''and/or'' to read ''or'' in paragraph f.2 of the List of Items Controlled section, to clarify the meaning of the text, as part of the TFEI revisions.

ECCN 1B003 is amended by:

a. Revising the Heading by replacing an ''or'' with a comma, and adding the phrase ''any of the following'' to clarify the text as part of the TFEI revisions; and

b. Revising paragraph 1B003.c to be more specific about which structures (1B003.a) and engines (1B003.b) the specially designed components are controlled for, as part of the TFEI revisions.

ECCN 1C008 is amended by:

a. Removing a comma in the Heading to clarify the text as part of the TFEI revisions;

b. Revising Note 1 by revising the phrase ''solid form'' to read ''solid fusible form'' to make it clear that the intent was not to specify non-fusible forms;

c. Replacing Note 2 with a Nota Bene to reference ECCN 1A003 for controls for non-''fusible'' aromatic polyimides in film, sheet, tape, or ribbon form;

d. Removing the redundant word ''acids'' from 1C008.b.2 as part of the TFEI revisions, because acid appears as a descriptor in each of the subparagraphs; and

e. Adding single quotes around the term 'glass transition temperature (Tg)' in 1C008.f, and in the Technical Note that follows, because this term is defined in the Technical Note that follows this paragraph.

ECCN 1C010 is amended by:

a. Adding a comma in the Heading to clarify the text as part of the TFEI revisions;

b. Adding double quotes around the terms ''specific modulus'' and ''specific tensile strength'' in paragraphs 1C010.a.1, a.2, b.1, b.2, c.1, and Note 1 after c.2, because these terms are defined in Part 772 of the EAR;

c. Adding a reference to ''ISO 10618 (2004) 10.2.1 Method A'' in the Technical Note following paragraph 1C010.b.2 and removing a reference to an example of a national equivalent tow test ''such as Japanese Industrial Standard JIS–R–7601, Paragraph 6.6.2'' to clarify how better to determine the properties for materials described in 1C010.b;

d. Replacing the word ''percent'' with the percent symbol in the Note to 1C010.c;

e. Re-indexing the sub-entries in the Note to 1C010.c to conform to the WA text;

f. Adding a comma and the phrase ''having any of the following'' in 1C010.d;

g. Adding a comma after ''as follows'' and adding the phrase ''having all of the following'' in 1C010.e;

h. Removing the word ''With'' in 1C010.e.2.a and e.2.b, because it was superfluous; and

i. Adding single quotes around the term 'glass transition temperature (Tg)' in 1C010.e and Notes in multiple locations to indicate that this term is defined within this ECCN entry.

ECCN 1C018 is amended by:

a. Adding a Related Control Note #8 to reference ECCN 1A008 for shaped charges, detonating cord, and cutters and severing tools, so the public will know to where these items were moved;

b. Adding a Related Control Note #9 to read ''See ECCN 1E001 for the ''development'' or ''production'' ''technology'' for the commodities controlled by ECCN 1C018, but not explosives or energetic materials that are under the jurisdiction of U.S. Department of State, Directorate of Defense Trade Controls.''

c. Removing and reserving paragraphs 1C018.a and .i, because these items are now controlled under the newly created ECCN 1A008, as well as adding a reference to ECCN 1A008 in the Related Controls paragraph of the List of Items Controlled section;

d. Revising paragraph 1C018.b to remove the words ''Detonating cord or'', because this item was moved to ECCN1A008.

ECCN 1D003 is amended by adding a reference to the Heading for the newly added paragraph 1A004.d, to add controls over software specially designed or modified to enable electronic equipment designed for automatically detecting or identifying the presence of ''explosives''. RS controls are also being added to this software, because of the utility in conventional weapons.

ECCN 1E001 is amended by:

a. Revising the reference to 1A006 to read 1A006.b in the Heading and in the NS Column 1 control paragraph, to focus the technology control to the development or production of 'disruptors';

b. Adding 1A008 to the Heading and to the NS Column 1 control paragraph, because 1E001 applies to all 1A ECCNs controlled for NS reasons;

c. Removing 1C992 from the list of ECCNs not controlled by 1E001, because the technology used to develop and produce 1C018 is the same as that used to develop and produce 1C992 commodities;

d. Adding ''RS'' to the Reasons for Control paragraph; and

e. Adding RS Column 2 controls for technology for the development, production, or use of 1A004.d to maintain RS controls formerly imposed under ECCN 2E983;

f. Adding 1A008 to the NS:1 controls;

ECCN 1E002 is amended by:

a. Removing a comma in the Heading to correct the punctuation, as a TFEI revision;

b. Removing the word ''characteristics'' from 1E002.c.1 because it was unnecessary, as part of the TFEI revisions;

c. Revising paragraphs c.1.b, c.1.b.1, and c.1.b.2 to clarify the text as part of the TFEI revisions;

d. Replacing the period with a semi-colon at the end of 1E002.f to fix the punctuation as part of the TFEI revisions;

e. Adding single quotes around the term 'libraries' in paragraph 1E002.g because it is a term defined in the Technical Note that follows that paragraph;

f. Adding a reference in 1E002.g to 1A004.d to control 'libraries' related to electronic equipment designed for automatically detecting or identifying the presence of ''explosives''; and

g. Removing the words ''the term'' in the Technical Note following paragraph 1E002.g, because these words were unnecessary in the sentence.

An Annex ''List of Explosives (see ECCNs 1A004 and 1A008)'' is added to the end of Category 1 in order to clarify the controls in ECCNs 1A004 and 1A008.

Category 2 Materials Processing

ECCN 2A983 is amended by removing and reserving paragraph b in the Items paragraph of the List of Items Controlled, because this type of explosive detection equipment is now controlled for national security reasons under ECCN 1A004 and the technology is controlled for regional stability reasons under 1E001.d.

Category 3 Electronics

Category 3 is amended by removing the last sentence in the Nota Bene which appears at the beginning of Category 3 and states ''If the integrated circuit is a silicon-based ''microcomputer microcircuit'' or microcontroller microcircuit described in 3A001.a.3 having an operand (data) word length of 8 bit or less, the status of the integrated circuit is determined in 3A001.a.3'', because in 2005 the Wassenaar Arrangement removed microcircuits manufactured from a silicon based semiconductor from 3A001.a.3.

ECCN 3A001 is amended by:

a. Revising the License Exception GBS eligibility paragraph to add newly controlled 3A001.b.10 (oscillators or oscillator assemblies) and 3A001.h (solid-state power semiconductor switches, diodes, or 'modules').

a.1. Adding dashes in front of each of the listed items in Note 2 after 3A001.a to be consistent with WA text.

b. Revising the control parameters for 'field programmable logic devices' in 3A001.a.7, by replacing 3A001.a.7.a through a.7.c with new paragraphs 3A001.a.7.a and 3A001.a.7.b. The parameters for field programmable logic devices were confusing, difficult to apply, and dated. The new control parameters are clearer and take into account advances in technology.

c. Adding Technical Note 2 after 3A001.a.7.b to help people better understand the scope of this entry.

d. Revising the parameters for 3A001.a.10 (Custom integrated circuits for which the function is unknown, or the control status of the equipment in which the integrated circuits will be used is unknown to the manufacturer) from more than ''1,000 terminals'' to ''1,500 terminals'' in 3A001.a.10.a, and from a typical ''basic gate propagation delay time'' of less than ''0.1 ns'' to ''0.02 ns'' in 3A001.a.10.b. The threshold for the number of terminals for custom integrated circuits is increased to 1,500, because integrated circuits with more than 1,000 terminals are losing controllability, and more terminals are needed for civil use integrated circuits.

e. Revising the average output power density parameter for microwave power amplifiers in 3A001.b.8.b to read ''average output power to mass ratio'' in order to avoid any confusion with the parameter for antenna output, because, in the case of RF transmission, power density is normally expressed in terms of Watts per unit area (W/m2) and usually applies to antenna output.

e.1. Removing a comma after (MPM) to correct the punctuation in 3A001.b.9;

f. Adding a new paragraph 3A001.b.10 to control oscillators or oscillator assemblies and a new Technical Note to clarify calculations involving operating frequency. This new control concerns the enhanced control of equipment for generating low phase noise signals, i.e., synthesized frequency generators, stable oscillators and stable oscillator assemblies. Low phase noise performance is especially important for search radar systems, as it determines the ultimate capability of the radar to detect low radar cross-section platforms in the presence of clutter, which is especially useful for military applications. The stable oscillator sets the baseline noise performance of these systems. Commercial applications for low phase noise oscillators include digital radio using Quadrature Amplitude Modulation (QAM), low-jitter communications, photonic-based communications and low-cost reference oscillators for accurate phase measurements. Low phase noise test equipment is commonly used for the research development and evaluation of modern wireless communication applications including cellular phones, commercial satellites and local area networks (LANs).

g. Removing the parenthetical phrase ''(i.e., 'signal processing' devices employing elastic waves in materials)'' from 3A001.c.1 and c.2, because this example caused more confusion than clarity.

h. Adding single quotes around the term 'frequency side-lobe rejection' in 3A001.c.1.b.1 and c.1.c.3 to indicate that this is a defined term in the entry and adding a Technical Note below 3A001.c.1.c.3 to define the term.

i. Revising the 'frequency side-lobe rejection' parameter from ''55 dB'' to ''65 dB'' in 3A001.c.1.b.1 and c.1.c.3 because of technological advances.

j. Revising the frequency parameter for bulk (volume) acoustic wave devices in 3A001.c.2 from ''2.5 GHz'' to ''6 GHz'' because of technological advances.

k. Adding a Note after 3A001.c.3 to exclude acoustic wave devices that are limited to a single band pass, low pass, high pass or notch filtering, or resonating function from 3A001.c control;

l. Revise the text '''Cells' and photovoltaic arrays as follows:'' to read '''Cells' as follows:'' in 3A001.e.1 to correct an error in the rule published on October 14, 2008 (73 FR 60910) when photovoltaic arrays were removed from this paragraph;

l.1. Adding single quotes around the term 'secondary cells' to indicate that this term is defined in this entry.

m. Replacing the period with a semi-colon in 3A001.e.4 to correct the punctuation as part of the TFEI revisions.

n. Revising the parameters for rotary input type absolute position encoders in 3A001.f by removing the two subparagraphs 3A001.f.1 and f.2 and replacing the accuracy of ''better than ± 2.5 seconds of arc'' with ''equal to or less (i.e., better) than ± 1.0 second of arc'' because of technological advances.

n.1. Replacing a period with a semi-colon after 3A001.g.2.b to correct punctuation for the addition of 3A001.h.

o. Adding a new paragraph 3A001.h to control solid-state power semiconductor switches, diodes, and 'modules', as well as a Technical Note to define 'modules'. Several Notes are also added: Note 1 to explain repetitive peak off-state voltage; Note 2 to provide the scope (parameters) of 3A001.h; and

Note 3 to explain that 3A001.h does not apply to switches, diodes, or 'modules' incorporated into equipment designed for civil automobile, civil railway, or ''civil aircraft'' applications. This new control for solid-state power semiconductor switches is added, because for military applications such as combat vehicles, even a small improvement in the maximum junction temperature of switches can have a big impact on reducing heat exchanger volume and weight—thus permitting the power converter to operate at a higher frequency, resulting in reduced power converter volume.

ECCN 3A002 is amended by:

a. Removing a comma in 3A002.a.6 to correct the punctuation;

a.1. Making a technical correction to the switching time control from ''10 ns'' to ''312 ps'' to correlate this control to the carrier frequency points and bandwidths referenced in 3A002.d.3; and

b. Adding a minimum synthesized frequency parameter of 3.2 GHz for synthesized signal generators in 3A002.d.4, as well as increasing (i.e., tightening) the phase noise control threshold in frequency regimes of greatest concern to the military, while leaving most commercial instruments uncontrolled. Also, by adding a Technical Note for 3A002.d.4 to explain what the ''F'' is in the parameter.

3B001 is amended by:

a. Adding a new Note after 3B001.a.1 to explain that 3B001.a.1 includes atomic layer epitaxy equipment; and

b. Replacing the word ''and'' with a comma to correct the grammar in 3B001.f.3.

Category 4 Computers

ECCN 4D001 is amended by:

a. Revising the Heading to harmonize with the Wassenaar Arrangement list;

b. Revising the Adjusted Peak Performance (APP) parameter in the License Exception TSR paragraph from 0.1 Weighted TeraFLOPS (WT) to 0.5 WT to harmonize with the increase in the APP control threshold and in consideration of technological advances;

c. Adding the phrase ''equipment as follows'' to the end of 4D001.b to clarify this sentence, as part of the TFEI revisions; and

d. Revising the APP parameter from ''0.04 WT'' to ''0.10 WT'' in 4D001.b.1, because processor technology is expected to continue to advance while transistors continue to shrink in size. The control level for software and technology is adjusted to 0.10 WT in consideration of the processors that are available in 2009.

ECCN 4D003 is amended by:

a. Revising the Heading by making the former 4D003.c the Heading, because 4D003.c is the only paragraph left in the entry;

b. Revising the License Exception TSR paragraph to replace the existing text ''Yes, except 4D003.c'' with ''N/A'', because 4D003.c is now the Heading;

c. Revising the Related Controls paragraph to direct the reader to Category 5, Part 2, regarding the treatment of information security;

d. Deleting 4D003.a (Operating system ''software'', ''software'' development tools and compilers specially designed for ''multi-data-stream processing'' equipment, in ''source code''), because nearly all hardware now includes support for ''multi-data-stream processing'' and a huge array of software available in ''source code'' is readily available throughout the world and on the internet; and

e. Removing paragraph 4D003.c and moving this control parameter to the Heading, because it's the only paragraph left in this entry.

WA agreed to remove the definition for ''multi-data stream processing'' from the WA definitions, because WA agreed to remove 4D003.a which was the only place where the term was used on the WA list. However, the term is still used on the CCL in ECCN 4E993, a unilateral entry, and therefore, this rule does not remove the term ''multi-data-stream processing'' from Part 772 of the EAR.

ECCN 4E001 is amended by:

a. Revising the Heading by making editorial revisions as part of the TFEI revisions;

b. Revising the License Exception TSR paragraph by revising the APP threshold from ''0.1 WT'' to ''0.5 WT'' to harmonize with the increase in the APP control threshold and in consideration of technological advances;

c. Adding the phrase ''equipment as follows'' to the end of 4E001.b to clarify this sentence, as part of the TFEI revisions; and

d. Revising the APP parameter from ''0.04 WT'' to ''0.10 WT'' in 4E001.b.1, because processor technology is expected to continue to advance while transistors continue to shrink in size. The control level for software and technology is adjusted to 0.10 WT in consideration of the processors currently available.

Category 5, Part I Telecommunications

ECCN 5A001 is amended by:

a. Revising the NS Column 2 control paragraph to add 5A001.h, which is a newly added control for electronic equipment designed or modified to prematurely activate or prevent the initiation of Radio Controlled Improvised Explosive Devices (RCIED);

b. Revising the License Exception LVS paragraph to add eligibility for 5A001.h at the $5,000 limit to accommodate low value shipments to countries listed in Country Group B;

c. Revising 5A001.f, f.1, and f.2 by making editorial revisions as part of the TFEI revisions;

d. Adding a new parameter paragraph 5A001.f.3, regarding jamming equipment, to ensure that telephony systems cannot be disrupted by undesirable elements and organizations;

e. Replacing the reference to the ''Munitions List'' with the equivalent U.S. regulations ''International Traffic in Arms Regulations (ITAR) (22 CFR Parts 120–130)'' in the Nota Bene following 5A001.f.3;

f. Removing a period from ''5A001.g.'' to read ''5A001.g'' in the Note after 5A001.g to correction the punctuation; and

g. Adding a new control paragraph 5A001.h to control electronic equipment designed or modified to prematurely activate or prevent the initiation of Radio Controlled Improvised Explosive Devices as part of the multilateral effort to stem terrorist activities.

h. Adding a Nota Bene after paragraph 5A001.h to reference the ITAR, because some specific equipment classified under 5A001.h may be under the jurisdiction of the Directorate of Defense Trade Control, Department of State.

ECCN 5B001 is amended by:

a. Revising the Heading to add clarifying text to more accurately describe the scope of this entry as part of the TFEI revisions.

b. Removing reference to ECCNs 5D001 and 5E001 from 5B001.a to remove the ambiguity of the reference.

c. Adding a comma to 5B001.a to clarify the text as part of the TFEI revisions;

d. Removing a period from ''5B001.a.'' to read ''5B001.a'' in the Note after 5B001.a to correct the punctuation.

e. Adding text that limits the scope of parameter in 5B001.b.2.b to clarify that this paragraph does not control equipment for development of optical amplification using praseodymium-doped fibers, and that this control is limited to equipment for development of praseodymium-doped fibers. The control language of 5B001.b.2 is nearly identical to that of 5E001.c.2, which indicates that these two sections were intended to be harmonized. Nevertheless, the scope of control of optical amplification in 5B001.b.2.b (all optical amplification) is much broader than the corresponding scope of control in 5E001.c.2.b (limited to optical

amplification using praseodymium-doped fluoride fiber amplifiers (PDFFA)).

f. Capitalizing the words ''Quadrature-Amplitude-Modulation'' in 5B001.b.4 because it is followed by an acronym, as part of the TFEI revisions.

ECCN 5D001 is amended by;

a. Revising the Heading to make editorial revisions as part of the TFEI revisions;

b. Adding a comma after ''equipment'' and removing a comma and replacing the period with a semi-colon in 5D001.a to correct the punctuation as part of the TFEI revisions;

c. Removing the reference to 5B001 in 5D001.a because the intent was to refer to 5A001 only;

d. Replacing a period with a semi-colon in 5D001.b and .c to correct the punctuation, as part of the TFEI revisions;

e. Adding a comma to the number 1750 in 5D001.d.2.a to correct the punctuation, as part of the TFEI revisions; and

f. Capitalizing Quadrature-Amplitude-Modulation in 5D001.d.4 because it is followed by an acronym, as part of the TFEI revisions.

ECCN 5E001 is amended by:

a. Removing a comma in the Heading to correct the punctuation as part of the TFEI revisions.

b. Making editorial revisions in 5E001.a, including removing the reference to ECCN 5B001 and revising the reference to 5D001 to read 5D001.a, to focus the ECCN on control, as part of the TFEI revisions.

c. Revising ''technologies'' to read ''technology'' and removing a comma in 5E001.b to correct the sentence as part of the TFEI revisions.

d. Replacing the period with a semi-colon in 5E001.b.4 to correct the punctuation as part of the TFEI revisions.

e. Removed the phrase ''telecommunication transmission or switching equipment, functions or features'' in 5E001.c because it was unnecessary, as part of the TFEI revisions.

f. Capitalized ''Praseodymium-Doped Fluoride Fiber Amplifiers'' in 5E001.c.2.b, because it is followed by an acronym, as part of the TFEI revisions.

g. Replacing the control parameter ''exceeding 8 optical carriers in a single optical window'' with ''of optical carriers at less than 100 GHz spacing'' for equipment employing a ''laser'' in 5E001.c.2.d. ''The number of optical carriers in a single window'' is not technically adequate in specifying such equipment because the size of ''a single window'' (equal to the range of wavelength) is not always the same. Therefore, ''spacing'' in GHz was adopted as the parameter for defining this technology.

h. Adding a Nota Bene to reference Product Group E of Category 6 for ''technology'' for the ''development'' or ''production'' of non-telecommunications equipment employing a ''laser''.

i. Capitalizing the words ''Amplitude-Modulation'' in 5E001.c.4.a because it is followed by an acronym, as part of the TFEI revisions.

j. Making minor changes to 5E001.c.4.c (removing the word ''or'' from the end of that clause) and c.5 (inserting the word ''or'' at the end of that clause), as a result of adding a new paragraph 5E001.c.6 to control ''technology'' according to the General Technology Note for the ''development'' or ''production'' of mobile equipment. Until recently, component technology and related communications technology have been the major obstacles in developing practical, wideband UV communications systems. However, component technology has recently advanced. Ultraviolet communications systems technology provides a means of highly covert, non-line-of-sight (NLOS) communications and Ethernet-speed wireless digital communications which are of strategic interest and concern.

k. Adding two new paragraphs 5E001.d and .e to control ''technology'' according to the General Technology Note for the ''development'' or ''production'' of Microwave Monolithic Integrated Circuit (MMIC) power amplifiers specially designed for telecommunications, and electronic devices and circuits containing components manufactured from ''superconductive'' materials, specially designed for telecommunications. The aim of these new controls is to clarify the status of technology for the development or production of two classes of components, MMIC power amplifiers and superconductor devices. If the devices are not specially designed for telecommunications and specified in Category 3, the corresponding technology for their development or production is controlled by reference in Category 3, Group E. Category 5, Part 1 did not specify MMIC power amplifiers or superconductor devices (such as high-Q superconductor filter, used in wireless systems). As such, the controllability of the technologies was in question even where the technologies exceeded Category 3 control thresholds and were the same technologies for the more generally designed Category 3 devices. Adding the new control paragraphs to 5E001 clarifies the control status of these technologies when specially designed for telecommunications devices.

Category 5, Part 2 ''Information Security''

ECCN 5A002 is amended by:

a. Making editorial changes to the Note at the beginning of the Items paragraph of the List of Items Controlled section by removing the parenthesis around paragraph letters 'a' through 'g' to make the entry consistent with other ECCN entries as part of the TFEI revisions.

b. Revising the Note at the beginning of the Items paragraph of the List of Items Controlled section by adding a new paragraph 'h' to release from 5A002 control equipment specially designed for the servicing of portable or mobile radiotelephones and similar client wireless devices that meet all the provisions of the Cryptography Note, as well as other listed parameters. The mass-marketed mobile devices include several kinds of product security features, both in hardware and ''software''. The product security features require service equipment capable of having a coded signal with the mobile devices being serviced. The equipment to be decontrolled includes test devices, ''software'' update devices and related accessories.

c. Revising the Note at the beginning of the Items paragraph of the List of Items Controlled section by adding a new paragraph 'i' to exclude from control certain short-range wireless products (i.e., for personal area networks) with an operating range not exceeding 30 meters. The rationale for adding a new Note 'i' is that wireless personal area networking products are not of strategic concern due to their distance limitation and predominant civil use in applications such as home entertainment systems, peripherals for laptops and personal computers, cell phone headsets, iPod headphones and home/business/industrial automation. A limitation of 30 meters is the typical range of such equipment according to the manufacturers' specifications. This equipment is manufactured worldwide. The key element of this proposal is that wireless personal area networking equipment and components are based on limited short-range wireless technologies. The primary examples currently are Bluetooth (IEEE 802.15.1), Wibree (ultra low power Bluetooth) and ZigBee (IEEE 802.15.4). This new Note 'i' does not decontrol wireless local area networks, such as those based on the WiFi standard (IEEE 802.11), which operate over greater distances and

encrypt data for transmission across networks such as the Internet.

d. Adding a new paragraph 5A002.a.7 to control non-cryptographic information and communications technology (ICT) security systems and devices meeting certain criteria. Highly secure ICT systems and devices are used in various military, government and commercial businesses, especially for connecting and/or segregating networks with different levels of information sensitivity. The recent improvements to high assurance technology (*e.g.,* development of secure kernels) means that it is now very easy to build high assurance ICT security products without 'military-grade' security components.

ECCN 5B002 is amended by:

a. Revising the Heading by making editorial changes, as part of the TFEI revisions; and

b. Revising 5B002.a and .b to remove circular references.

ECCN 5D002 is amended by:

a. Revising the Heading to make clarifying changes as part of the TFEI revisions;

b. Revising 5D002.a and c.1 to remove circular references and focus the ECCN on the control.

c. Replacing periods with semi-colons in 5D002.a and b as part of the TFEI revisions.

ECCN 5E002 is amended by revising the reference ''5D002'' to read ''5D002.a or 5D002.c'' in the Heading, as well as the EI control paragraph and the License Requirement Note of the License Requirement section, to focus the ECCN on control.

Category 6 Sensors

ECCN 6A001 is amended by:

a. Revising the License Exception LVS eligibility paragraph to add eligibility for 6A001.c (Diver deterrent acoustic systems) at a $5,000 limit.

b. Revising the License Exception GBS and CIV eligibility paragraphs to add eligibility for 6A001.c, because this is basically an anti-terrorism device and the concern here is in regards to the export or reexport of the device to E:1 countries;

b.1. In the Note that follows 6A001.a.1, adding the phrase ''equipment as follows'' to conform to the WA text;

c. Replacing the period with a semi-colon at the end of 6A001.b, because of the addition of paragraph 6A001.c; and

d. Adding a new paragraph 6A001.c and two Notes to control diver deterrent acoustic systems to reduce the threat of attacks on ports, harbors, offshore platforms, shipping and coastal facilities.

ECCN 6A004 is amended by:

a. Revising the Heading to better represent the scope of this entry, as part of the TFEI revisions;

b. Removing a comma from 6A004.a to correct the punctuation, as part of the TFEI revisions;

c. Replacing the word ''lambda'' with the scientific symbol for lambda ''λ'' in two places in 6A004.a.4, as part of the TFEI revisions;

d. Replacing the period with a semi-colon in 6A004.b.2, c.4, and d.4 to correct the punctuation, as part of the TFEI revisions;

e. Adding the word ''components'' to 6A004.c.1 and c.4 to add consistency to the list of components in 6A004.c, as part of the TFEI revisions;

e.1. Adding the word ''raw'' to the beginning of 6A004.c.2 and adding the word ''processed'' in front of the second ''substrates'' to conform with Wassenaar text;

e.2. Removing a superfluous comma in 6A004.d to correct the punctuation;

f. Adding the word ''equipment'' to 6A004.d.1 and d.2 to add consistency to the list of equipment in 6A004.d, as part of the TFEI revisions;

g. Removing the word ''characteristics'' from 6A004.e because it was unnecessary, as part of the TFEI revisions;

h. Removing unnecessary words from 6A004.e.1, e.2, and e.3 to make the parameters more concise, as part of the TFEI revisions;

i. Replacing the semi-colon with a period to correct the punctuation in 6A004.e.3 as this is the last subparagraph of 6A004, as part of the TFEI revisions;

j. Adding single quotes around 'aspheric optical elements' in the Note for 6A004.e, as part of the TFEI revisions;

k. Removing unnecessary words from the Note for 6A004.e to make the Note more concise, as part of the TFEI revisions.

ECCN 6A005 is amended by:

a. Replacing the word ''in'' with ''by'' to correct the preposition in Note 2 at the beginning of the Items paragraph and in 6A005.d, as part of the TFEI revisions;

b. Replacing the words ''the following'' with ''as follows'' for consistency in text typically used in the Wassenaar List, as part of the TFEI revisions;

c. Removing a comma in 6A005.a, b, b.6.b, c, d, d.1, d.1.a, d.1.a.2, d.1.b, d.1.b.2, d.1.c, d.4, d.5, d.5.c, e, f, to correct the punctuation, as part of the TFEI revisions;

d. Removing unnecessary words, such as ''A'', ''An'', ''having'', ''having an'', or ''with an'' in nearly every paragraph in the Items paragraph of the List of Items Controlled section, and in some cases replacing the words ''having an'' with the word ''and'';

e. Replacing the double quotes with single quotes around the term 'Wall-plug efficiency' in 6A005.a.6.a.1 and a.6.b.1, because the term is defined in the Related Definition section of 6A005;

f. Replacing the period with a semi-colon in 6A005.a.8, d.1.b.3, d.1.c.3, and d.1.d to correct the punctuation, as part of the TFEI revisions;

g. Adding the words ''equal to or'' in 6A005.b.6.b to correct a minor oversight in the established controls, leading to a loophole for a certain type of laser with a pulse duration of 1 ns;

h. Adding commas to 6A005.c.2., d.1.c.1, d.1.c.2, d.1.c.3, e.2 and f.3, to correct the punctuation and clarify the paragraphs, as part of the TFEI revisions;

i. Adding single quotes around the terms 'array' and 'array stacks' in 6A005.d.1.d and in the Technical Note following this paragraph to indicate that the terms are defined in the Technical Note below paragraph 6A004.d.1.d, as well as removing the phrase ''that is'' and replacing the word ''under'' with ''by'' to conform to the WA text;

j. Replacing double quotes with single quotes around the term 'non-repetitive pulsed' in 6A005.d.6 and the Note following 6A005.d.6.b to indicate that the term is defined in this Note, as part of the TFEI revisions;

k. Adding single quotes around the term 'active cooling' in 6A005.e.1 and the Technical Note following this paragraph to indicate that the term is defined in this Technical Note;

l. Replacing the word ''lambda'' with the scientific symbol ''λ'', in 6A005.f.3 as part of the TFEI revisions.

ECCN 6A006 is amended by:

a. Deleting the extra ''and'' in the Heading to correct the sentence, as part of the TFEI revisions;

b. Replacing the term ''noise level (sensitivity)'' with the term 'sensitivity' in the License Exception LVS eligibility paragraph, and in the following subparagraphs 6A006.a.1.a, a.1.b, a.2, a.3, a.4, a.5, b, c.2., and c.3 because this term was condensed and defined in the Technical Note after 6A006.d as a term more commonly used by manufacturers;

c. Adding double quotes around the term ''Magnetometers'' in 6A006.a.1, a.2, a.3, because this term is defined in Part 772 of the EAR;

d. Removing the word ''characteristics'' from 6A006.a.1 because it is unnecessary, as part of the TFEI revisions;

e. Adding the modifier ''at a frequency of 1 Hz'' to 6A006.a.2 to clarify the parameter;

f. Replacing the period with a semi-colon in 6A006.b to correct the punctuation, as part of the TFEI revisions;

g. Replacing the capitalization with lower case letters in ''underwater electric field sensors'' of 6A006.d to correct the grammar, as part of the TFEI revisions;

h. Adding a Technical Note after 6A006.d to define the term 'sensitivity', because this term is used throughout 6A006 and is a more common term used by manufacturers than ''noise level''.

i. Adding parentheses around ''rms'' wherever it appears in 6A006 to conform to WA text.

ECCN 6A008 is amended by:

a. Removing the unnecessary word ''characteristics'' from the Heading to make it more concise, as part of the TFEI revisions;

b. Replacing the alphabetic bullets with dashes to simplify the list in the Note at the beginning of the items paragraph, as part of the TFEI revisions;

c. Removing the words ''Having a'' from 6A008.b to remove the redundant wording that also appears in the Heading, as part of the TFEI revisions;

d. Adding the word ''and'' to correct the grammar and clarify the sentence in 6A008.h, as part of the TFEI revisions;

e. Replacing the phrase ''provided that all the following conditions are met'' with the more commonly used ''and having all of the following'' in 6A008.i, Note b to bring consistency and clarity, as part of the TFEI revisions;

f. Removing unnecessary words from the Note following 6A008.i to provide more concise wording, as part of the TFEI revisions;

g. Replacing a comma with ''and'' in 6A008.j to correct the grammar, as part of the TFEI revisions;

h. Moving the ''or'' from 6A008.j.1 to 6A008.j.2 because of the addition of new paragraph 6A008.j.3;

i. Adding a new paragraph 6A008.j.3 and 3 new Notes to control ''laser'' radar or Light Detection and Ranging equipment for airborne bathymetric littoral surveys (surveys of shores for troop deployment); and

j. Replacing the word ''with'' with ''and having'' in 6A008.k and .l to clarify the sentence and use more commonly used text, as part of the TFEI revisions.

ECCN 6A996 is amended by:

a. Replacing the words ''noise level (sensitivity)'' with 'sensitivity' in 6A996.a, because it is the more commonly used term to describe this parameter.

b. Adding a Technical Note after paragraph 6A996.a to define the term 'sensitivity'.

c. Adding parenthese around the term ''rms'' in 9A996.a.

ECCN 6D003 is amended by:

a. Deleting a comma in the Heading to correct the punctuation.

b. Making RS controls applicable to paragraph 'c' in the Reasons for Control paragraph under the License Requirements section.

c. Adding section headings, such as ''Acoustics'', throughout the Items paragraph to assist the reader.

d. Replacing a period with a semi-colon to correct the punctuation in 6D003.a.4, as part of the TFEI revisions.

e. Adding a new paragraph 6D003.c to control software designed or modified for cameras incorporating ''focal plane arrays'' specified by 6A002.a.3.f and designed or modified to remove a frame rate restriction and allow the camera to exceed the frame rate specified in 6A003.b.4 Note 3.a. With the addition of this paragraph, a license is now required to export or reexport the software that would give an uncontrolled camera the capability of a controlled camera.

f. Removing a comma to correct the punctuation of 6D003.f and .h as part of the TFEI revisions.

g. Adding the acronym ''ATC'' after ''Air Traffic Control'' in paragraph 6D003.h.1, as part of the TFEI revisions.

h. Replacing the word ''which'' with ''and having all of the following'' in 6D003.h.2 to use the more commonly used text to introduce a list of parameters, as part of the TFEI revisions.

i. Removing superfluous words from 6D003.h.2.a, as part of the TFEI revisions; and

j. Replacing double quotes with single quotes around the term 'average side lobe level' in 6A008.h.2.b and in the Technical Note that follows, as part of the TFEI revisions, to indicate that the term is defined in the entry.

ECCN 6E993 is amended by:

a. Replacing the word ''with'' with ''having all of the following'' in 6E993.a for consistency;

b. Removing superfluous words from 6E993.a.1 and a.2 to be more concise;

b.1. Replacing the word ''lambda'' with the scientific symbol and adding parentheses around the term ''rms'' in 6E993.a.2 to harmonize with WA text.

b.2. Replacing the phrase ''of less'' with ''lower (better)'' and adding parentheses around the term ''rms'' to harmonize with Wassenaar text in 6E993.d.1 and d.2.

c. Replacing the term ''noise level'' with 'sensitivity' in 6E993.d.1 and d.2 to use a more common manufacturing term;

d. Adding a Technical Note after 6E993. d.2 to define 'sensitivity'.

Category 7 Navigation and Avionics

ECCN 7A003 is amended by:

a. Correcting the capitalization and replacing the word ''therefore'' with ''as follows'' in the Heading to be consistent with typically used text, as part of the TFEI revisions;

b. Deleting a comma and adding a comma to correct the punctuation, and removing the superfluous word ''characteristics'' in 7A003.a, as part of the TFEI revisions;

c. Replacing a comma with the word ''and'' in 7A003.a and .b to correct sentence structure and to clarify the sentence, as part of the TFEI revisions;

d. Correcting the capitalization, removing the superfluous word ''characteristics'' from 7A003.c, and adding the word ''and'' to 7A003.c as part of the TFEI revisions;

e. Adding parenthesis and removing an extraneous space to add clarity to 7A003.c.1, as part of the TFEI revisions;

f. Removing a hyphen in 7A003.c.2 to conform with WA text; and

g. Replacing the word ''that'' with ''which'' in Note 2 to 7A003 to conform with WA text.

Category 8 Marine

ECCN 8A001 is amended by:

a. Removing a comma in 8A001.b to correct the punctuation;

b. Adding single quotes around the term 'operate autonomously' in 8A001.b.1 to indicate the term is defined in the Technical Note following 8A001.b.3.b, as part of the TFEI revisions;

c. Removing 8A001.b.3.a and b.3.d and redesignating 8A001.b.3.b and 8A001.b.3.c as 8A001.b.3.a and 8A001.b.3.b respectively, as well as adding the word ''continuously'' in the new 8A001.b.3.a to meet new technological and market developments;

d. Removing superfluous words in the new 8A001.b.3.b, and the word ''and'';

e. Replacing the double quotes with single quotes around the term 'operate autonomously' in Technical Note 1 and 2 that follows 8A001.b.3.b, as part of the TFEI revisions;

f. Replacing the double quotes with single quotes around the term 'range' in Technical Note 2 that follows 8A001.b.3.b, as part of the TFEI revisions, as well as replacing the word ''cover'' with 'operate autonomously';

g. Replacing a comma with an ''and'' in 8A001.c to fix the grammar and add clarity, as part of the TFEI revisions;

h. Removing superfluous words from 8A001.c.2, d.2, d.3, f.1, f.2, f.3, i.1, i.2 to be more concise, as part of the TFEI revisions;

i. Adding an ''and'' to clarify the sentence in 8A001.e.2, as part of the TFEI revisions;

j. Removing the superfluous word ''characteristics'' in 8A001.f, as part of the TFEI revisions;

k. Replacing the word ''tons'' with ''tonnes'' in 8A001.i.1 and i.2, because WA meant metric tonnes, which differs from American tons in weight and to conform with WA text;

l. Adding single quotes around the term 'small waterplane area vessel' in 8A001.i.2 and in the Technical Note that follows, to indicate that this is a defined term in this entry, as part of the TFEI revisions; and

m. Replacing the word ''draught'' with ''draft'' in the Technical Note after 8A001.i.2, to conform to the WA text.

ECCN 8A002 is amended by:

a. Adding the word ''Marine'' to the Heading to be more descriptive, as part of the TFEI revisions;

b. Adding ''and'' to 8A002.a to add clarity as part of the TFEI revisions;

c. Replacing the word ''in'' with ''by'' and a period with a semi-colon in 8A002.a.4, as part of the TFEI revisions;

d. Replacing the words ''The object of this control'' with ''The objective of 8A002.a.4'' in the Technical Note that follows 8A002.a.4 to be more precise, as part of the TFEI revisions;

e. Adding single quotes around the term 'syntactic foam' in the Technical Note after 8A002.a.4. to indicate that the term is defined in the entry, as part of the TFEI revisions;

f. Adding commas around the clause ''using navigation data'', removing the word ''and'', and adding the phrase ''and having any of the following'' to 8A002.b for clarity, as part of the TFEI revisions;

g. Deleting a comma to correct the punctuation in 8A002.d as part of the TFEI revisions;

h. Adding single quotes around the term 'limiting resolution' in 8A002.d.1.a and d.1.b to indicate that the term is defined in the Technical Note that follows 8A002.d.1.c.2, as part of the TFEI revisions, as well as removing the phrase ''in television'' to conform with WA text;

i. Replacing the word ''containing'' with ''and having'' to clarify the sentence, as part of the TFEI revisions;

j. Deleting a comma and replacing a comma with ''and'' in 8A002.d.2 to clarify the sentence, as part of the TFEI revisions;

k. Replacing the word ''having'' with ''with'' and removing a superfluous comma in 8A002.e to clarify the sentence, as part of the TFEI revisions;

l. Moving the phrase ''as follows'' to the end of 8A002.g to clarify the sentence, as part of the TFEI revisions;

m. Replacing the comma with ''and'' in 8A002.h, .i, o.1.e, o.2.d, and o.3.a to clarify the sentence, as part of the TFEI revisions;

n. Moving the word ''composite'' in 8A002.h.2 to clarify the sentence, as part of the TFEI revisions;

o. Removing a comma in 8A002.i.2 to correct the punctuation, as well as adding single quotes around the term 'freedom of movement' to indicate that this term is defined in the Technical Note that follows 8A002.i.2;

p. Replacing the word ''Note'' with ''Technical Note'' to properly identify the note that follows 8A002.i.2;

q. Removing the comma in 8A002.j, j.2, j.4, o.1.e, o.2.c, and o.2.d to correct the punctuation, as part of the TFEI revisions;

r. Adding a comma in 8A002.j.1.a, j.1.c, j.2.a, j.2.c, j.3.a, j.4.a, m, n, o.1.a, o1.c, o.2, and o.2.a to correct the punctuation, as part of the TFEI revisions;

s. Replacing the words ''specially designed'' with ''having all of the following'' in 8A002.j.1.d and j.3.b to clarify the sentence, as part of the TFEI revisions;

t. Adding the words ''specially designed'' in 8A002.j.1.d.1, j.1.d.2, j.1.d.3, j.3.b.1, j.3.b.2, and j.3.b.3 to clarify the sentences, as part of the TFEI revisions;

u. Adding the word ''and'' in 8A002.j.3 to .l to clarify the sentence, as part of the TFEI revisions;

v. Moving the phrase ''as follows'' within 8A002.o.1 to clarify the sentence, as part of the TFEI revisions;

w. Replacing the word ''tons'' with ''tonnes'' in 8A002.o.3 to clarify that American tons differ from metric tonnes and to conform to WA text; and

x. Replacing a period with a semi-colon in 8A002.p to correct the punctuation, as part of the TFEI revisions.

Category 9 Propulsion Systems, Space Vehicles and Related Equipment

ECCN 9A012 is amended by:

a. Moving the period in the Heading from before the parenthetical phrase ''see List of Items Controlled'' to after the parenthetical phrase;

b. Revising 9A012.b.2 to reflect the original intent to control the ''associated systems'' that allow UAVs to achieve the characteristics described in 9A012.a (i.e., remote-controlled flight beyond visual range and autonomous flight capability); and

c. Adding a comma to 9A012.b.3 to correct the punctuation.

Part 740.17 ''License Exception ENC''

Section 740.17 ''License Exception ENC'' is amended by removing wireless ''personal area network'' (PAN) items from paragraph (b)(4) to harmonize with the addition of wireless PAN equipment to the decontrol Note in ECCN 5A002. These wireless PAN commodities and ''software'' are now classified under ECCNs 5A992 and 5D992, respectively, without any requirement for review or qualification as 'mass market' products.

Part 742 Control Policy: CCL-Based Controls

Regional Stability Controls

This rule revises section 742.6 ''Regional Stability'' by amending the paragraphs that list the ECCNs that are controlled for RS Column 1 (RS:1) and RS Column 2 (RS:2) to coincide with changes to regional stability controls made by this rule. This rule revises § 742.6(a)(1) to add 6D003.c, because this software is related to commodities that are controlled for RS reasons.

ECCN 1A004.d, 1D003 (software to enable equipment to perform the functions of equipment controlled by 1A004.d), 1E001 (technology for the development, production, or use of 1A004.d) are added to § 742.6(a)(4)(i) in order to maintain the RS:2 controls that were applied to this equipment when it was listed under ECCNs 2A983.b, 2D983, and 2E983.

''Encryption Items''

Section 742.15, regarding ''Encryption Items'', is amended by removing wireless ''personal area network (PAN)'' equipment from paragraphs (b)(3)(i) and the entire entry for (b)(3)(ii) to harmonize with the addition of wireless PAN equipment to the decontrol Note in ECCN 5A002. These wireless PAN commodities and ''software'' are now classified under ECCNs 5A992 and 5D992, respectively, without any requirement for review or qualification as 'mass market' products.

Part 743 Special Reporting

3A002.g.2 is revised in three places to read 3A002.g.1 in paragraph 743.1(c)(1)(iii) of the EAR, because in 2007 the WA moved the space qualified parameter for atomic frequency standards from paragraph 3A002.g.2 to 3A002.g.1 and in 2008 the WA harmonized the Sensitive List with the change made in 2007.

WA reporting requirements for 5B001.a, regarding software and technology specially designed for the development or production of equipment, function, or features of equipment, are removed by this rule. The WA agreed to remove this software and technology from the Wassenaar Sensitive List, because, while the WA

intended to control technology and software for 5A001 equipment, the WA did not intend to have ECCN 5B001 on the Wassenaar Sensitive List. WA reporting requirements are added for 6A006.c.1, magnetic gradiometers using multiple magnetometers specified by 6A006.a.1 or 6A006.a.2 (with a sensitivity lower (or better) than 2pT rms per square root Hz).

This rule amends Note 2 of the Notes to paragraph 743.1(c)(1)(vi) to harmonize the text in the Note with revisions made to 6A006.

Definitions in Part 772

Section 772.1 is amended by:

a. Adding a reference to Category 5, Part 1, to the following terms: ''electronically steerable phased array antenna'', and ''local area network;''

b. Removing the reference to Category 5 from the following terms: ''Program'' and ''source code;''

c. Revising the definitions for the following terms: ''Bias (accelerometer)'' and ''Personalized smart card;''

d. Removing the term ''Noise Level;'' and

e. Adding the terms ''Explosives'', ''Fusible'', and ''personal area network.''

Since August 21, 2001, the Act has been in lapse. However, the President, through Executive Order 13222 of August 17, 2001 (3 CFR, 2001 Comp. 783 (2002)), which has been extended by successive Presidential Notices, the most recent being that of August 13, 2009 (74 FR 41325 (August 14, 2009)), has continued the Regulations in effect under the International Emergency Economic Powers Act (50 U.S.C. 1701–1707).

Saving Clause

Shipments of items removed from license exception eligibility or eligibility for export without a license as a result of this regulatory action that were on dock for loading, on lighter, laden aboard an exporting carrier, or en route aboard a carrier to a port of export, on December 11, 2009, pursuant to actual orders for export to a foreign destination, may proceed to that destination under the previous license exception eligibility or without a license so long as they have been exported from the United States before February 9, 2010. Any such items not actually exported before midnight, on February 9, 2010, require a license in accordance with this regulation.

Rulemaking Requirements

1. This final rule has been determined to be not significant for purposes of Executive Order 12866.

2. Notwithstanding any other provision of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) (PRA), unless that collection of information displays a currently valid Office of Management and Budget (OMB) Control Number. This rule involves two collections of information subject to the PRA. One of the collections has been approved by OMB under control number 0694 0088, ''Multi Purpose Application,'' and carries a burden hour estimate of 58 minutes for a manual or electronic submission. The other of the collections has been approved by OMB under control number 0694 0106, ''Reporting and Recordkeeping Requirements under the Wassenaar Arrangement,'' and carries a burden hour estimate of 21 minutes for a manual or electronic submission. Send comments regarding these burden estimates or any other aspect of these collections of information, including suggestions for reducing the burden, to OMB Desk Officer, New Executive Office Building, Washington, DC 20503; and to Jasmeet Seehra, OMB Desk Officer, by e-mail at *jseehra@omb.eop.gov* or by fax to (202) 395–7285; and to the Office of Administration, Bureau of Industry and Security, Department of Commerce, 14th and Pennsylvania Avenue, NW., Room 6622, Washington, DC 20230.

3. This rule does not contain policies with Federalism implications as that term is defined under Executive Order 13132.

4. The provisions of the Administrative Procedure Act (5 U.S.C. 553) requiring notice of proposed rulemaking, the opportunity for public participation, and a delay in effective date, are inapplicable because this regulation involves a military and foreign affairs function of the United States (5 U.S.C. 553(a)(1)). Further, no other law requires that a notice of proposed rulemaking and an opportunity for public comment be given for this final rule. Because a notice of proposed rulemaking and an opportunity for public comment are not required to be given for this rule under the Administrative Procedure Act or by any other law, the analytical requirements of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) are not applicable. Therefore, this regulation is issued in final form. Although there is no formal comment period, public comments on this regulation are welcome on a continuing basis. Comments should be submitted to Sharron Cook, Office of Exporter Services, Bureau of Industry and Security, Department of Commerce, 14th and Pennsylvania Ave., NW., Room 2705, Washington, DC 20230.

List of Subjects

15 CFR Part 740

Administrative practice and procedure, Exports, Reporting and recordkeeping requirements.

15 CFR Part 742

Exports, Terrorism.

15 CFR Part 743

Administrative practice and procedure, Reporting and recordkeeping requirements.

15 CFR Part 772

Exports.

15 CFR Part 774

Exports, Reporting and recordkeeping requirements.

■ Accordingly, parts 740, 742, 743, 772 and 774 of the Export Administration Regulations (15 CFR parts 730–774) are amended as follows:

PART 740 [AMENDED]

■ 1. The authority citations for part 740 continue to read as follows:

Authority: 50 U.S.C. app. 2401 *et seq.;* 50 U.S.C. 1701 *et seq.;* 22 U.S.C. 7201 *et seq.;* E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Notice of August 13, 2009, 74 FR 41325 (August 14, 2009).

■ 2. Section 740.17 is amended by:

■ a. Revising the last sentence in paragraph (b)(4)(i) to read as set forth below; and

■ b. Removing and reserving paragraph (b)(4)(iii).

§ 740.17 Encryption Commodities, Software and Technology (ENC).

(b) * * *

(4) * * *

(i) * * * Certain items excluded from review by this paragraph may also be excluded from review under paragraph (b)(4)(iv) of this section (commodities and software that provide ''ancillary cryptography'').

* * * * *

PART 742 [AMENDED]

■ 3. The authority citations for part 742 continue to read as follows:

Authority: 50 U.S.C. app. 2401 *et seq.;* 50 U.S.C. 1701 *et seq.;* 22 U.S.C. 3201 *et seq.;* 42 U.S.C. 2139a; 22 U.S.C. 7201 *et seq.;* 22 U.S.C. 7210; Sec 1503, Pub. L. 108–11, 117 Stat. 559; E.O. 12058, 43 FR 20947, 3 CFR,

1978 Comp., p. 179; E.O. 12851, 58 FR 33181, 3 CFR, 1993 Comp., p. 608; E.O. 12938, 59 FR 59099, 3 CFR, 1994 Comp., p. 950; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Presidential Determination 2003–23 of May 7, 2003, 68 FR 26459, May 16, 2003; Notice of July 23, 2008, 73 FR 43603 (July 25, 2008); Notice of November 10, 2008, 73 FR 67097 (November 12, 2008).

■ 4. Section 742.6 is amended by:
■ a. Adding ''6D003.c'' in numerical order to paragraph (a)(1); and
■ b. Revising paragraph (a)(4)(i) to read as follows:

§ 742.6 Regional Stability.

(a) * * *
(4) * * *

(i) *License Requirements Applicable to Most RS Column 2 Items.* As indicated in the CCL and in RS Column 2 of the Commerce Country Chart (see Supplement No. 1 to Part 738 of the EAR), a license is required to any destination except Australia, Japan, New Zealand, and countries in the North Atlantic Treaty Organization (NATO) for items described on the CCL under ECCNs 0A918, 0E918, 1A004.d, 1D003 (software to enable equipment to perform the functions of equipment controlled by 1A004.d), 1E001 (technology for the development, production, or use of 1A004.d), 2A983, 2D983, 2E983, 8A918, and for military vehicles and certain commodities (specially designed) used to manufacture military equipment, described on the CCL in ECCNs 0A018.c, 1B018.a, 2B018, 9A018.a and .b, 9D018 (only software for the ''use'' of commodities in ECCN 9A018.a and .b), and 9E018 (only technology for the ''development'', ''production'', or ''use'' of commodities in 9A018.a and .b).

* * * * *

■ 5. Section 742.15 is amended by:
■ a. Revising the last sentence in paragraph (b)(3)(i) to read as set forth below; and
■ b. Removing and reserving paragraph (b)(3)(ii).

§ 742.15 Encryption items.

* * * * *

(b) * * *
(3) * * *

(i) * * * Certain items excluded from review by this paragraph may also be excluded from review under paragraph (b)(3)(iii) of this section (commodities and software that provide ''ancillary cryptography'').

* * * * *

PART 743—[AMENDED]

■ 6. The authority citations for part 743 continue to read as follows:

Authority: 50 U.S.C. app. 2401 *et seq.;* Public Law 106–508; 50 U.S.C. 1701 *et seq.;* E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Notice of August 13, 2009 (74 FR 41325 (August 14, 2009))

■ 7. Section 743.1 is amended by revising paragraphs (c)(1)(iii), (c)(1)(v), (c)(1)(vi) introductory text, and Note 2 of the Notes to (c)(1)(vi), to read as follows:

§ 743.1 Wassenaar Arrangement.

* * * * *

(c) * * *
(1) * * *

(iii) *Category 3:* 3A002.g.1, 3B001.a.2, 3D001 for ''development'' or ''production'' of 3A002.g.1 or 3B001.a.2, and 3E001 for ''development'' or ''production'' of 3A002.g.1 or 3B001.a.2;

* * * * *

(v) *Category 5:* 5A001.b.3; 5B001.a (items specially designed for 5A001.b.3 and b.5); 5D001.a (specially designed for the ''development'' or ''production'' of equipment, function, or features in 5A001.b.3) and 5D001.b (specially designed or modified to support ''technology'' under 5E001.a as described in this paragraph); and 5E001.a (for the ''development'' or ''production'' of equipment, functions or features specified by 5A001.b.3 or ''software'' in 5D001.a or 5D001.b as described in this paragraph);

(vi) *Category 6:* 6A001.a.1.b (changing 10 kHz to 5 kHz and adding the text ''or a sound pressure level exceeding 224 dB (reference 1 μPa at 1 m) for equipment with an operating frequency in the band from 5kHz to 10 kHz inclusive'' to the existing text in 6A001.a.1.b.1), and 6A001.a.2.d; 6A002.a.1.a, 6A002.a.1.b, 6A002.a.2.a (changing 350 uA/Im to 700 uA/Im in 6A002.a.2.a.3.a), 6A002.a.3, 6A002.b, 6A002.c (incorporating 6A002.a.2.a or 6A002.a.3 having characteristics described in this paragraph), 6A002.e; 6A003.b.3 (incorporating 6A002.a.2.a having characteristics described in this paragraph), 6A003.b.4 (incorporating 6A002.a.3 having characteristics described in this paragraph); 6A004.c and d; 6A006.a.1, 6A006.a.2 (having a ''noise level'' (sensitivity) lower (better) than 2pT rms per square root Hz), 6A006.c.1, 6A006.d (certain items only; see Note to this paragraph); 6A008.d, .h, and .k; 6D001 (for 6A004.c and .d and 6A008.d, .h, and .k); 6E001 (for equipment and software listed in this paragraph); and 6E002 (for equipment listed in this paragraph);

Notes to paragraph (c)(1)(vi):

* * * * *

Note 2: *Reports for 6A006.d,* are for ''compensation systems'' for the following:

a. Magnetic sensors controlled in 6A006.a.2 using optically pumped or nuclear precession (proton/Overhauser) ''technology'' that will permit these sensors to realize a 'sensitivity' lower (better) than 2 pT rms per square root Hz.

b. Underwater electric field sensors controlled in 6A006.b.

c. Magnetic gradiometers controlled in 6A006.c that will permit these sensors to realize a 'sensitivity' lower (better) than 3 pT/m rms per square root Hz.

* * * * *

PART 772—[AMENDED]

■ 8. The authority citations for part 772 continue to read as follows:

Authority: 50 U.S.C. app. 2401 *et seq.;* 50 U.S.C. 1701 *et seq.;* E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Notice of August 13, 2009 (74 FR 41325 (August 14, 2009)).

§ 772.1 [Amended]

■ 9. Section 772.1 is amended by:
■ a. Removing the phrase ''(Cat 6)'' and adding in its place ''(Cat 6 and 5 Part 1)'' in the term ''Electronically steerable phased array antenna'';
■ b. Removing the phrase ''(Cat 4)'' and adding in its place ''(Cat 4 and 5 Part 1)'' in the term ''local area network'';
■ c. Removing the phrase ''(Cat 2, 4, 5, and 6)'' and adding in its place ''(Cat 2, 4, and 6)'' in the term ''Program'';
■ d. Removing the phrase ''(Cat 4, 5, 6, 7, and 9)'' and adding in its place ''(Cat 4, 6, 7, and 9)'' in the term ''Source code'';
■ e. Revising the definitions for '' ''Bias'' (accelerometer)'', ''Personal area network'', and ''Personalized smart card'';
■ f. Adding the terms ''Explosives'', ''Fusible'', to read as follows; and
■ g. Removing the term ''Noise Level''.

§ 772.1 Definitions of Terms as Used in the Export Administration Regulations (EAR).

* * * * *

Bias. (accelerometer) (Cat 7)—The average over a specified time of accelerometer output measured at specified operating conditions, that has no correlation with input acceleration or rotation. ''Bias'' is expressed in g or in meters per second ^{2} (g or m/s ^{2}) (IEEE Std 528–2001) (Micro g equals $1x10^{-6}$ g).

* * * * *

Explosives. (Cat 1)—see Annex ''List of Explosives'' located at the end of Category 1 of Supplement No. 1 to Part 774 ''Commerce Control List''.

* * * * *

Fusible. (Cat 1)—Capable of being cross-linked or polymerized further (cured) by the use of heat, radiation,

catalysts, etc., or that can be melted without pyrolysis (charring).

* * * * *

Personal area network (Cat 5 Part 2)—A data communication system having all of the following characteristics:

a. Allows an arbitrary number of independent or interconnected 'data devices' to communicate directly with each other; *and*

b. Is confined to the communication between devices within the immediate vicinity of an individual person or device controller (e.g., single room, office, or automobile).

Technical Note: 'Data device' means equipment capable of transmitting or receiving sequences of digital information.

* * * * *

Personalized smart card. (Cat 5 Part 2) A smart card or an electronically readable personal document (e.g., e-passport), containing a microcircuit which has been programmed for a specific application and cannot be reprogrammed for any other application by the user.

* * * * *

PART 774—[AMENDED]

■ 10. The authority citations for part 774 continue to read as follows:

Authority: 50 U.S.C. app. 2401 *et seq.;* 50 U.S.C. 1701 *et seq.;* 10 U.S.C. 7420; 10 U.S.C. 7430(e); 22 U.S.C. 287c, 22 U.S.C. 3201 *et seq.,* 22 U.S.C. 6004; 30 U.S.C. 185(s), 185(u); 42 U.S.C. 2139a; 42 U.S.C. 6212; 43 U.S.C. 1354; 46 U.S.C. app. 466c; 50 U.S.C. app. 5; 22 U.S.C. 7201 *et seq.;* 22 U.S.C. 7210; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Notice of August 13, 2009, 74 FR 41325 (August 14, 2009).

Supplement No. 1 to Part 774—Commerce Control List [Amended]

■ 11. Supplement No. 1 to Part 774 (the Commerce Control List) is amended by revising the Heading of Category 1 to read as follows:

* * * * *

Category 1—Special Materials and Related Equipment, Chemicals, ''Microorganisms,'' and ''Toxins''

* * * * *

■ 12. Supplement No. 1 to Part 774 (the Commerce Control List), Category 1,,ECCN 1A001 is amended by revising the items paragraph in the List of Items Controlled section, to read as follows:

1A001 Components made from fluorinated compounds, as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

a. Seals, gaskets, sealants or fuel bladders, specially designed for ''aircraft'' or aerospace use, made from more than 50% by weight of any of the materials controlled by 1C009.b or 1C009.c;

b. Piezoelectric polymers and copolymers, made from vinylidene fluoride materials, controlled by 1C009.a:

b.1. In sheet or film form; *and*

b.2. With a thickness exceeding 200 μm;

c. Seals, gaskets, valve seats, bladders or diaphragms, having all of the following:

c.1. Made from fluoroelastomers containing at least one vinylether group as a constitutional unit; and

c.2. Specially designed for ''aircraft'', aerospace or missile use.

■ 13. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1A002 is amended by revising the items paragraph in the List of Items Controlled section, to read as follows:

1A002 ''Composite'' structures or laminates, having any of the following (see List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

a. Consisting of an organic ''matrix'' and materials controlled by 1C010.c 1C010.d, or 1C010.e *or*

b. Consisting of a metal or carbon ''matrix'', and any of the following:

b.1. Carbon ''fibrous or filamentary materials'' having all of the following:

b.1.a. A ''specific modulus'' exceeding 10.15×10^6 m; *and*

b.1.b. A ''specific tensile strength'' exceeding 17.7×10^4 m; *or*

b.2. Materials controlled by 1C010.c.

Note 1: 1A002 does not control composite structures or laminates made from epoxy resin impregnated carbon ''fibrous or filamentary materials'' for the repair of ''civil aircraft'' structures or laminates, provided that the size does not exceed 100 cm x 100 cm.

Note 2: 1A002 does not control finished or semi-finished items, specially designed for purely civilian applications as follows:

a. Sporting goods;

b. Automotive industry;

c. Machine tool industry;

d. Medical applications.

Note 3: 1A002.b.1 does not apply to finished or semi-finished items containing a maximum of two dimensions of interwoven filaments and specially designed for applications as follows:

a. Metal heat-treatment furnaces for tempering metals;

b. Silicon boule production equipment.

* * * * *

■ 14. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1A003 is amended by revising the Heading, and the Related Controls and Items paragraphs in the List of Items Controlled section, to read as follows:

1A003 Manufactures of non-''fusible'' aromatic polyimides in film, sheet, tape or ribbon form having any of the following (see List of Items Controlled).

* * * * *

List of Items Controlled

Unit: * * *

Related Controls: This entry does not control manufactures when coated or laminated with copper and designed for the production of electronic printed circuit boards. For ''fusible'' aromatic polyimides in any form, see 1C008.a.3.

Related Definitions: * * *

Items:

a. A thickness exceeding 0.254 mm; or

b. Coated or laminated with carbon, graphite, metals or magnetic substances.

* * * * *

■ 15. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1A004 is amended by revising the Heading, the License Requirement section, and the Related Definitions and Items paragraphs in the List of Items Controlled section, to read as follows:

1A004 Protective and detection equipment and components, not specially designed for military use, as follows (see List of Items Controlled).

License Requirements

Reason for Control: NS, CB, RS, AT.

Control(s)	Country chart
NS applies to entire entry	NS Column 2.
CB applies to chemical detection systems and. dedicated detectors therefor, in 1A004.c, that also have the technical characteristics described in 2B351.a.	CB Column 2.
RS apply to 1A004.d	RS Column 2.
AT applies to entire entry	AT Column 1.

* * * * *

List of Items Controlled

* * * * *

Related Definitions: (1) 'Adapted for use in war' means: Any modification or selection (such as altering purity, shelf life, virulence, dissemination characteristics, or resistance to UV radiation) designed to increase the effectiveness in producing casualties in humans or animals, degrading equipment or damaging crops or the environment. (2) 'Riot control agents' are substances which, under the expected conditions of use for riot control purposes, produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following termination of exposure. (Tear gases are a subset of 'riot control agents'.)

Items:

a. Gas masks, filter canisters and decontamination equipment therefor, designed or modified for defense against any of the following, and specially designed components therefor:

a.1. Biological agents 'adapted for use in war';
a.2. Radioactive materials 'adapted for use in war';
a.3. Chemical warfare (CW) agents; *or*
a.4. 'Riot control agents', as follows:
a.4.a. α-Bromobenzeneacetonitrile, (Bromobenzyl cyanide) (CA) (CAS 5798–79–8);
a.4.b. [(2-chlorophenyl) methylene] propanedinitrile, (o-Chlorobenzylidenemalononitrile) (CS) (CAS 2698–41–1);
a.4.c. 2-Chloro-1-phenylethanone, Phenylacyl chloride (ω-chloroacetophenone) (CN) (CAS 532–27–4);
a.4.d. Dibenz-(b,f)-1,4-oxazephine, (CR) (CAS 257–07–8);
a.4.e. 10-Chloro-5,10-dihydrophenarsazine, (Phenarsazine chloride), (Adamsite), (DM) (CAS 578–94–9);
a.4.f. N-Nonanoylmorpholine, (MPA) (CAS 5299–64–9);
b. Protective suits, gloves and shoes, specially designed or modified for defense against any of the following:
b.1. Biological agents 'adapted for use in war';
b.2. Radioactive materials 'adapted for use in war'; *or*
b.3. Chemical warfare (CW) agents;
c. Nuclear, biological and chemical (NBC) detection systems, specially designed or modified for detection or identification of any of the following, and specially designed components therefor:
c.1. Biological agents 'adapted for use in war';
c.2. Radioactive materials 'adapted for use in war'; *or*
c.3. Chemical warfare (CW) agents;
d. Electronic equipment designed for automatically detecting or identifying the presence of ''explosives'' (as listed in the annex at the end of Category 1) residues and utilizing 'trace detection' techniques (*e.g.,* surface acoustic wave, ion mobility spectrometry, differential mobility spectrometry, mass spectrometry).

Technical Note: 'Trace detection' is defined as the capability to detect less than 1 ppm vapor, or 1 mg solid or liquid.

Note 1: 1A004.d. does not apply to equipment specially designed for laboratory use.

Note 2: 1A004.d. does not apply to non-contact walk-through security portals.

Note: 1A004 does not control:
a. Personal radiation monitoring dosimeters;
b. Equipment limited by design or function to protect against hazards specific to residential safety and civil industries, such as mining, quarrying, agriculture, pharmaceuticals, medical, veterinary, environmental, waste management, or to the food industry.

* * * * *

■ 16. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1A007 is amended by removing the License Requirement Note and the last sentence in Technical Note 2.

■ 17. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1A008 is added to read as follows:

1A008 Charges, devices and components, as follows (see List of Items Controlled).

License Requirements

Reason for Control: NS, AT, UN.

Control(s)	Country chart
NS applies to entire entry AT applies to entire entry UN applies to entire entry	NS Column 2. AT Column 1. Iraq, North Korea, and Rwanda.

License Exceptions

LVS: $3,000 for .a through .c, except N/A for Rwanda $6,000 for .d, except N/A for Rwanda.
GBS: N/A.
CIV: N/A.

List of Items Controlled

Unit: $ value.
Related Controls: (1) All of the following are subject to the export licensing jurisdiction of the Department of State, Directorate of Defense Trade Controls (see 22 CFR part 121):
a. High explosives and related equipment specially designed for military use;
b. Explosive devices or charges in this entry that utilize USML controlled energetic materials (See 22 CFR 121.1 Category V), if they have been specifically designed, developed, configured, adapted, or modified for a military application;
c. Shaped charges that have all of the following a uniform shaped conical liner with an included angle of 90 degrees or less, more than 2.0 kg of controlled materials, and a diameter exceeding 4.5 inches;
d. Detonating cord containing greater than 0.1 kg per meter (470 grains per foot) of controlled materials;
e. Cutters and severing tools containing greater than 10 kg of controlled materials;
f. With the exception of cutters and severing tools, devices or charges controlled by this entry where the USML controlled materials can be easily extracted without destroying the device or charge; and
g. Individual USML controlled energetic materials in this entry, even when compounded with other materials, when not incorporated into explosive devices or charges controlled by this entry or 1C992.
(2) See also ECCNs 1C011, 1C018, 1C111, and 1C239 for additional controlled energetic materials. See ECCN1E001 for the ''development'' or ''production'' ''technology'' for the commodities controlled by ECCN 1A008, but not for explosives or commodities that are under the jurisdiction of U.S. Department of State, Directorate of Defense Trade Controls.
Related Definitions: N/A.
Items:
a. 'Shaped charges' having all of the following:
a.1. Net Explosive Quantity (NEQ) greater than 90 g; *and*
a.2. Outer casing diameter equal to or greater than 75 mm;
b. Linear shaped cutting charges having all of the following, and specially designed components therefor:
b.1. An explosive load greater than 40 g/m; *and*
b.2. A width of 10 mm or more;
c. Detonating cord with explosive core load greater than 64 g/m;
d. Cutters, other than those specified by 1A008.b, and severing tools, having a NEQ greater than 3.5 kg.

Technical Note: 'Shaped charges' are explosive charges shaped to focus the effects of the explosive blast.

Note: The only charges and devices specified in 1A008 are those containing ''explosives'' (see list of explosives in the Annex at the end of Category 1) and mixtures thereof.

* * * * *

■ 18. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1B001 is amended by removing the phrase ''and/or'' and adding in its place ''or'' in paragraph f.2 in the Items paragraph of the List of Items Controlled section.

■ 19. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1B003 is amended by revising the Heading, and paragraph c. in the Items paragraph of the List of Items Controlled section, to read as follows:

1B003 Tools, dies, molds or fixtures, for ''superplastic forming'' or ''diffusion bonding'' titanium, aluminum or their alloys, specially designed for the manufacture of any of the following (*see* List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

* * * * *

c. Specially designed components for structures specified by 1B003.a or for engines specified by 1B003.b.

* * * * *

■ 20. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1C008 is amended by revising the Heading and the Items paragraph of the List of Items Controlled section, to read as follows:

1C008 Non-fluorinated polymeric substances as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:
a. Non-fluorinated polymeric substances, as follows:
a.1. Bismaleimides;
a.2. Aromatic polyamide-imides;
a.3. Aromatic polyimides;

a.4. Aromatic polyetherimides having a 'glass transition temperature (Tg)' exceeding 513K (240 °C).

Note: 1C008.a controls the substances in liquid or solid ''fusible'' form, including resin, powder, pellet, film, sheet, tape, or ribbon.

N.B. For non-''fusible'' aromatic polyimides in film, sheet, tape, or ribbon form, see ECCN 1A003.

b. Thermoplastic liquid crystal copolymers having a heat distortion temperature exceeding 523 K (250 °C) measured according to ISO 75–2 (2004), method A, or national equivalents, with a load of 1.80 N/mm^2 and composed of:

b.1. Any of the following:

b.1.a. Phenylene, biphenylene or naphthalene; or

b.1.b. Methyl, tertiary-butyl or phenyl substituted phenylene, biphenylene or naphthalene; and

b.2. Any of the following:

b.2.a. Terephthalic acid;

b.2.b. 6-hydroxy-2 naphthoic acid; or

b.2.c. 4-hydroxybenzoic acid;

c. [RESERVED]

d. Polyarylene ketones;

e. Polyarylene sulphides, where the arylene group is biphenylene, triphenylene or combinations thereof;

f. Polybiphenylenethersulphone having a 'glass transition temperature (Tg)' exceeding 513 K (240 °C).

Technical Note: The 'glass transition temperature (Tg)' for 1C008 materials is determined using the method described in ISO 11357–2 (1999) or national equivalents.

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■ 21. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1C010 is amended by revising the Heading and the Items paragraph in the List of Items Controlled section, to read as follows:

1C010 ''Fibrous or filamentary materials'', which may be used in organic ''matrix'', metallic ''matrix'' or carbon ''matrix'' ''composite'' structures or laminates, as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

a. Organic ''fibrous or filamentary materials'', having all of the following:

a.1. A ''specific modulus'' exceeding 12.7 $\times 10^6$ m; and

a.2. A ''specific tensile strength'' exceeding 23.5×10^4 m;

Note: 1C010.a does not control polyethylene.

b. Carbon ''fibrous or filamentary materials'', having all of the following:

b.1. A ''specific modulus'' exceeding 12.7 $\times 10^6$ m; *and*

b.2. A ''specific tensile strength'' exceeding 23.5×10^4 m;

Technical Note: Properties for materials described in 1C010.b should be determined using SACMA recommended methods SRM 12 to 17, ISO 10618 (2004) 10.2.1 Method A or national equivalent tow tests, and based on lot average.

Note: 1C010.b does not control fabric made from ''fibrous or filamentary materials'' for the repair of ''civil aircraft'' structures or laminates, in which the size of individual sheets does not exceed 100 cm $\times$ 100 cm.

c. Inorganic ''fibrous or filamentary materials'', having all of the following:

c.1. A ''specific modulus'' exceeding 2.54 $\times 10^6$ m; *and*

c.2. A melting, softening, decomposition or sublimation point exceeding 1,922 K (1,649 °C) in an inert environment;

Note: 1C010.c does not control:

a. Discontinuous, multiphase, polycrystalline alumina fibers in chopped fiber or random mat form, containing 3% by weight or more silica, with a ''specific modulus'' of less than 10×10^6 m;

b. Molybdenum and molybdenum alloy fibers;

c. Boron fibers;

d. Discontinuous ceramic fibers with a melting, softening, decomposition or sublimation point lower than 2,043 K (1,770 °C) in an inert environment.

d. ''Fibrous or filamentary materials'', having any of the following:

d.1. Composed of any of the following:

d.1.a. Polyetherimides controlled by 1C008.a; or

d.1.b. Materials controlled by 1C008.b to 1C008.f; or

d.2. Composed of materials controlled by 1C010.d.1.a or 1C010.d.1.b and ''commingled'' with other fibers controlled by 1C010.a, 1C010.b or 1C010.c;

e. Resin-impregnated or pitch-impregnated fibers (prepregs), metal or carbon-coated fibers (preforms) or ''carbon fiber preforms'', as follows:

e.1. Made from ''fibrous or filamentary materials'' controlled by 1C010.a, 1C010.b or 1C010.c;

e.2. Made from organic or carbon ''fibrous or filamentary materials'', having all the following:

e.2.a. A ''specific tensile strength'' exceeding 17.7×10^4 m;

e.2.b. A ''specific modulus'' exceeding 10.15×10^6 m;

e.2.c. Not controlled by 1C010.a or 1C010.b; *and*

e.2.d. When impregnated with materials controlled by 1C008 or 1C009.b, having a 'glass transition temperature (T_g)' exceeding 383 K (110 C) or with phenolic or epoxy resins, having a 'glass transition temperature (T_g)' equal to or exceeding 418 K (145 °C).

Notes: 1C010.e does not control:

1. Epoxy resin ''matrix'' impregnated carbon ''fibrous or filamentary materials'' (prepregs) for the repair of ''civil aircraft'' structures or laminates, in which the size of individual sheets of prepreg does not exceed 100 cm $\times$ 100cm;

2. Prepregs when impregnated with phenolic or epoxy resins having a 'glass transition temperature (T_g)' less than 433 K (160 °C) and a cure temperature lower than the 'glass transition temperature'

Technical Note: The 'glass transition temperature (T_g)' for 1C010.e materials is determined using the method described in ASTM D 3418 using the dry method. The 'glass transition temperature' for phenolic and epoxy resins is determined using the method described in ASTM D 4065 at a frequency of 1 Hz and a heating rate of 2 K (2 °C) per minute using the dry method.

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■ 22. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1C018 is amended by revising the Related Controls and Items paragraph in the List of Items Controlled section, to read as follows:

1C018 Commercial Charges and Devices Containing Energetic Materials on the Wassenaar Arrangement Munitions List and Certain Chemicals as Follows (See List of Items Controlled).

* * * * *

List of Items Controlled

Unit: * * *

Related Controls: (1) Explosive devices or charges in paragraphs .c through .k of this entry that utilize USML controlled energetic materials (See 22 CFR 121.1 Category V) are subject to the licensing authority of the U.S. Department of State, Directorate of Defense Trade Controls if they have been specifically designed, developed, configured, adapted, or modified for a military application. (2) With the exception of slurries if the USML controlled materials utilized in devices and charges controlled by paragraphs .c through .k of this entry can be easily extracted without destroying the device or charge, then they are subject to the export licensing authority of the U.S. Department of State, Directorate of Defense Trade Controls. (3) Commercial prefabricated slurries and emulsions containing greater than 35% of USML controlled energetic materials are subject to the export licensing authority of the U.S. Department of State, Directorate of Defense Trade Controls. (4) The individual USML controlled energetic materials in paragraphs .c through .k of this entry, even when compounded with other materials, remain subject to the export licensing authority of the Department of State when not incorporated into explosive devices or charges controlled by this entry or 1C992. (5) The chemicals in paragraphs .l and .m of this entry, when incorporated into items listed on the United States Munitions List, become subject to the licensing jurisdiction of the U.S. Department of State, Directorate of Defense Trade Controls. (6) See also ECCNs 1C011, 1C111, and 1C239 for additional controlled energetic materials. (7) See ECCN 1C238 for additional controls on chlorine trifluoride (ClF_3). (8) See ECCN 1A008 for shaped charges, detonating cord, and cutters and severing tools. (9) See ECCN1E001 for the ''development'' or ''production'' ''technology'' for the commodities controlled by ECCN 1C018, but not explosives or energetic materials that are under the jurisdiction of U.S. Department of State, Directorate of Defense Trade Controls.

Related Definitions: * * *

Items:

a. [RESERVED]

b. Shock tubes containing greater than 0.064 kg per meter (300 grains per foot), but not more than 0.1 kg per meter (470 grains per foot) of controlled materials;

c. Cartridge power devices containing greater than 0.70 kg, but not more than 1.0 kg of controlled materials;

d. Detonators (electric or nonelectric) and assemblies thereof containing greater than 0.01 kg, but not more than 0.1 kg of controlled materials;

e. Igniters containing greater than 0.01 kg, but not more than 0.1 kg of controlled materials;

f. Oil well cartridges containing greater than 0.015 kg, but not more than 0.1 kg of controlled materials;

g. Commercial cast or pressed boosters containing greater than 1.0 kg, but not more than 5.0 kg of controlled materials;

h. Commercial prefabricated slurries and emulsions containing greater than 10 kg and less than or equal to thirty-five percent by weight of USML controlled materials;

i. [RESERVED]

j. Pyrotechnic devices when designed exclusively for commercial purposes (e.g., theatrical stages, motion picture special effects, and fireworks displays), and containing greater than 3.0 kg, but not more than 5.0 kg of controlled materials; or

k. Other commercial explosive devices and charges, not controlled by 1C018.c through .g above, when used for commercial applications and containing greater than 1.0 kg, but not more than 5.0 kg of controlled materials.

l. Propyleneimine (2-methylaziridine) (CAS 75–55–8); or

m. Any oxidizer or mixture thereof that is a compound composed of fluorine and one or more of the following—other halogens, oxygen, or nitrogen.

Note: Nitrogen trifluoride (NF_3) in a gaseous state is controlled by ECCN 1C992 and not by 1C018.

Note: National security is not a reason for control for chlorine trifluoride.

Note: If a chemical in paragraphs .1 or .m of 1C018 is incorporated into a commercial charge or device described in paragraphs .c through .k of ECCN 1C018 or in 1C992, the classification of the commercial charge or device applies to the item.

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■ 23. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1D003 is amended by:

■ a. Revising the Heading;

■ b. Adding ''RS'' after ''NS'' to the Reason for Control paragraph in the License Requirements section;

■ c. Adding an RS Column 2 paragraph after the NS Column 2 paragraph in the License Requirements section, to read as follows:

1D003 ''Software'' specially designed or modified to enable equipment to perform the functions of equipment controlled under 1A004.c or 1A004.d.

License Requirements

Reason for Control: NS, RS, AT.

Control(s)	Country chart
NS applies to entire entry	NS Column 2.
RS applies to software for equipment controlled by 1A004.d.	RS Column 2.
AT applies to entire entry	AT Column 1.

* * * * *

■ 24. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1E001 is amended by:

■ a. Revising the Heading;

■ b. Adding ''RS'' after CB in the Reason for Control paragraph of the License Requirements section;

■ c. Revising the NS Column 1 paragraph in the License Requirements section; and

■ d. Adding a new RS Column 2 paragraph after the CB Column 2 paragraph in the License Requirements section; and

■ e. Revising the Related Controls paragraph, to read as follows:

1E001 ''Technology'' According to the General Technology Note for the ''Development'' or ''Production'' of Items Controlled by 1A001.b, 1A001.c, 1A002, 1A003, 1A004, 1A005, 1A006.b, 1A007, 1A008, 1A101, 1B (except 1B999), or 1C (except 1C355, 1C980 to 1C984, 1C988, 1C990, 1C991, 1C995 to 1C999).

License Requirements

Reason for Control: NS, MT, NP, CB, RS, AT.

Control(s)	Country chart
NS applies to ''technology'' for items controlled by 1A001.b and .c, 1A002, 1A003, 1A005, 1A006.b, 1A007, 1A008, 1B001 to 1B003, 1B018, 1C001 to 1C011, or 1C018.	NS Column 1.
* * * * *	
RS applies to technology for equipment controlled in 1A004.d.	RS Column 2.

* * * * *

Control(s)	Country Chart
NS applies to ''technology'' for items controlled by 1A001.b and .c, 1A002, 1A003, 1A005, 1A006.b, 1A007, 1A008, 1B001 to 1B003, 1B018, 1C001 to 1C011, or 1C018.	NS Column 1.
* * * * *	
RS applies to technology for equipment controlled in 1A004.d.	RS Column 2.

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List of Items Controlled

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Related Controls: (1) Also see ECCNs 1E101, 1E201, and 1E202. (2) See ECCN 1E002.g for control libraries (parametric technical databases) specially designed or modified to enable equipment to perform the functions of equipment controlled under 1A004.c (Nuclear, biological and chemical (NBC) detection systems). (3) ''Technology'' for lithium isotope separation (see related ECCN 1B233) and ''technology'' for items described in ECCN 1C012 are subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110). (4) ''Technology'' for items described in ECCN 1A102 is subject to the export licensing authority of the U.S. Department of State, Directorate of Defense Trade Controls (see 22 CFR part 121).

* * * * *

■ 25. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1, ECCN 1E002 is amended by revising the Heading and the Items paragraph in the List of Items Controlled section, to read as follows:

1E002 Other ''technology'' as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

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Items:

a. ''Technology'' for the ''development'' or ''production'' of polybenzothiazoles or polybenzoxazoles;

b. ''Technology'' for the ''development'' or ''production'' of fluoroelastomer compounds containing at least one vinylether monomer;

c. ''Technology'' for the design or ''production'' of the following base materials or non-''composite'' ceramic materials:

c.1. Base materials having all of the following:

c.1.a. Any of the following compositions:

c.1.a.1. Single or complex oxides of zirconium and complex oxides of silicon or aluminum;

c.1.a.2. Single nitrides of boron (cubic crystalline forms);

c.1.a.3. Single or complex carbides of silicon or boron; or

c.1.a.4. Single or complex nitrides of silicon;

c.1.b. Any of the following total metallic impurities (excluding intentional additions):

c.1.b.1. Less than 1,000 ppm for single oxides or carbides; or

c.1.b.2. Less than 5,000 ppm for complex compounds or single nitrides; and

c.1.c. Being any of the following:

c.1.c.1. Zirconia with an average particle size equal to or less than 1 μm and no more than 10% of the particles larger than 5 μm;

c.1.c.2. Other base materials with an average particle size equal to or less than 5 μm and no more than 10% of the particles larger than 10 μm; *or*

c.1.c.3. Having all of the following:

c.1.c.3.a. Platelets with a length to thickness ratio exceeding 5;

c.1.c.3.b. Whiskers with a length to diameter ratio exceeding 10 for diameters less than 2 μm; *and*

c.1.c.3.c. Continuous or chopped fibers less than 10 μm in diameter;

c.2. Non-''composite'' ceramic materials composed of the materials described in 1E002.c.1;

Note: 1E002.c.2 does not control technology for the design or production of abrasives.

d. ''Technology'' for the ''production'' of aromatic polyamide fibers;

e. ''Technology'' for the installation, maintenance or repair of materials controlled by 1C001;

f. ''Technology'' for the repair of ''composite'' structures, laminates or materials controlled by 1A002, 1C007.c or 1C007.d;

Note: 1E002.f does not control ''technology'' for the repair of ''civil aircraft'' structures using carbon ''fibrous or filamentary materials'' and epoxy resins, contained in aircraft manufacturers' manuals.

g. 'Libraries' (parametric technical databases) specially designed or modified to enable equipment to perform the functions of equipment controlled under 1A004.c or 1A004.d.

Technical Note: For the purpose of 1E002.g, 'library' (parametric technical database) means a collection of technical information, reference to which may enhance the performance of relevant equipment or systems.

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■ 26. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 1 is amended by adding to the end of this category an annex that lists explosives to read as follows:

Annex to Category 1

List of Explosives (See ECCNs 1A004 and 1A008)

1. ADNBF (aminodinitrobenzofuroxan or 7-amino-4,6-dinitrobenzofurazane-1-oxide) (CAS 97096–78–1);

2. BNCP (cis-bis (5-nitrotetrazolato) tetra amine-cobalt (III) perchlorate) (CAS 117412–28–9);

3. CL–14 (diamino dinitrobenzofuroxan or 5,7-diamino-4,6-dinitrobenzofurazane-1-oxide) (CAS 117907–74–1);

4. CL–20 (HNIW or Hexanitrohexaazaisowurtzitane) (CAS 135285–90–4); chlathrates of CL–20;

5. CP (2-(5-cyanotetrazolato) penta amine-cobalt (III) perchlorate) (CAS 70247–32–4);

6. DADE (1,1-diamino-2,2-dinitroethylene, FOX7);

7. DATB (diaminotrinitrobenzene) (CAS 1630–08–6);

8. DDFP (1,4-dinitrodifurazanopiperazine);

9. DDPO (2,6-diamino-3,5-dinitropyrazine-1-oxide, PZO) (CAS 194486–77–6);

10. DIPAM (3,3′-diamino-2,2′,4,4′,6,6′-hexanitrobiphenyl or dipicramide) (CAS 17215–44–0);

11. DNGU (DINGU or dinitroglycoluril) (CAS 55510–04–8);

12. Furazans as follows:

a. DAAOF (diaminoazoxyfurazan);

b. DAAzF (diaminoazofurazan) (CAS 78644–90–3);

13. HMX and derivatives, as follows:

a. HMX (Cyclotetramethylenetetranitramine, octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazine, 1,3,5,7-tetranitro-1,3,5,7-tetraza-cyclooctane, octogen or octogene) (CAS 2691–41–0);

b. difluoroaminated analogs of HMX;

c. K–55 (2,4,6,8-tetranitro-2,4,6,8-tetraazabicyclo [3,3,0]-octanone-3, tetranitrosemiglycouril or keto-bicyclic HMX) (CAS 130256–72–3);

14. HNAD (hexanitroadamantane) (CAS 143850–71–9);

15. HNS (hexanitrostilbene) (CAS 20062–22–0);

16. Imidazoles as follows:

a. BNNII (Octahydro-2,5-bis(nitroimino)imidazo [4,5-d]imidazole);

b. DNI (2,4-dinitroimidazole) (CAS 5213–49–0);

c. FDIA (1-fluoro-2,4-dinitroimidazole);

d. NTDNIA (N-(2-nitrotriazolo)-2,4-dinitroimidazole);

e. PTIA (1-picryl-2,4,5-trinitroimidazole);

17. NTNMH (1-(2-nitrotriazolo)-2-dinitromethylene hydrazine);

18. NTO (ONTA or 3-nitro-1,2,4-triazol-5-one) (CAS 932–64–9);

19. Polynitrocubanes with more than four nitro groups;

20. PYX (2,6-Bis(picrylamino)-3,5-dinitropyridine) (CAS 38082–89–2);

21. RDX and derivatives, as follows:

a. RDX (cyclotrimethylenetrinitramine, cyclonite, T4, hexahydro-1,3,5-trinitro-1,3,5-triazine, 1,3,5-trinitro-1,3,5-triaza-cyclohexane, hexogen or hexogene) (CAS 121–82–4);

b. Keto-RDX (K–6 or 2,4,6-trinitro-2,4,6-triazacyclohexanone) (CAS 115029–35–1);

22. TAGN (triaminoguanidinenitrate) (CAS 4000–16–2);

23. TATB (triaminotrinitrobenzene) (CAS 3058–38–6);

24. TEDDZ (3,3,7,7-tetrabis(difluoroamine) octahydro-1,5-dinitro-1,5-diazocine);

25. Tetrazoles as follows:

a. NTAT (nitrotriazol aminotetrazole);

b. NTNT (1-N-(2-nitrotriazolo)-4-nitrotetrazole);

26. Tetryl (trinitrophenylmethylnitramine) (CAS 479–45–8);

27. TNAD (1,4,5,8-tetranitro-1,4,5,8-tetraazadecalin) (CAS 135877–16–6);

28. TNAZ (1,3,3-trinitroazetidine) (CAS 97645–24–4);

29. TNGU (SORGUYL or tetranitroglycoluril) (CAS 55510–03–7);

30. TNP (1,4,5,8-tetranitro-pyridazino[4,5-d]pyridazine) (CAS 229176–04–9);

31. Triazines as follows:

a. DNAM (2-oxy-4,6-dinitroamino-s-triazine) (CAS 19899–80–0);

b. NNHT (2-nitroimino-5-nitro-hexahydro-1,3,5-triazine) (CAS 130400–13–4);

32. Triazoles as follows:

a. 5-azido-2-nitrotriazole;

b. ADHTDN (4-amino-3,5-dihydrazino-1,2,4-triazole dinitramide) (CAS 1614–08–0);

c. ADNT (1-amino-3,5-dinitro-1,2,4-triazole);

d. BDNTA ([bis-dinitrotriazole]amine);

e. DBT (3,3′-dinitro-5,5-bi-1,2,4-triazole) (CAS 30003–46–4);

f. DNBT (dinitrobistriazole) (CAS 70890–46–9);

g. NTDNA (2-nitrotriazole 5-dinitramide) (CAS 75393–84–9);

h. NTDNT (1-N-(2-nitrotriazolo) 3,5-dinitrotriazole);

i. PDNT (1-picryl-3,5-dinitrotriazole);

j. TACOT (tetranitrobenzotriazolobenzotriazole) (CAS 25243–36–1);

33. ''Explosives'' not listed elsewhere in this list having a detonation velocity exceeding 8,700 m/s, at maximum density, or a detonation pressure exceeding 34 GPa (340 kbar);

34. Organic ''explosives'' not listed elsewhere in this list yielding detonation pressures of 25 GPa (250 kbar) or more that will remain stable at temperatures of 523 K (250 °C) or higher, for periods of 5 minutes or longer;

35. Nitrocellulose (containing more than 12.5% nitrogen);

36. Nitroglycol;

37. Pentaerythritol tetranitrate (PETN);

38. Picryl chloride;

39. 2,4,6-Trinitrotoluene (TNT);

40. Nitroglycerine (NG);

41. Triacetone Triperoxide (TATP);

42. Guanidine nitrate;

43. Nitroguanidine (NQ) (CAS 556–88–7).

■ 27. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 2, ECCN 2A983 is amended by removing and reserving paragraph b in the Items paragraph of the List of Items Controlled.

■ 28. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 3 is amended by removing the last sentence in the Nota Bene (''N.B.'').

■ 29. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 3. Electronics, Export Control Classification Number (ECCN) 3A001 is amended by:

■ a. Revising the GBS paragraph of the License Exception section; and

■ b. In the Items paragraph of the List of Items Controlled section:

■ 1. Revising Note 2 in paragraph a;

■ 2. Revising paragraphs a.7, a.10, b.8, introductory text of b.9, b.10, introductory text of c, c.1, c.1.a, c.1.b.1, c.1.c.3, c.2, c.3, e.1 introductory text, e.1.b, e.4 introductory text, f introductory text, and g.2.b introductory text; and

The revisions and additions read as follows:

■ 3. Adding paragraphs b.10 and h.

3A001 Electronic components and specially designed components therefor, as follows (see List of Items Controlled).

* * * * *

License Exceptions

* * * * *

GBS: Yes for 3A001.a.1.b, a.2 to a.12 (except .a.5.a when controlled for MT), b.2,

b.8 except for TWTAs exceeding 18 GHz), b.9., b.10, .g, and .h.

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List of Items Controlled

* * * * *

Items:

a. * * *

Note 2: Integrated circuits include the following types:

—''Monolithic integrated circuits'';

—''Hybrid integrated circuits'';

—''Multichip integrated circuits'';

—''Film type integrated circuits'', including silicon-on-sapphire integrated circuits;

—''Optical integrated circuits''.

* * * * *

a.7. 'Field programmable logic devices' having any of the following:

a.7.a. A maximum number of digital input/outputs greater than 200; *or*

a.7.b. A system gate count of greater than 230,000;

Note: 3A001.a.7 includes:

—Simple Programmable Logic Devices (SPLDs),

—Complex Programmable Logic Devices (CPLDs),

—Field Programmable Gate Arrays (FPGAs),

—Field Programmable Logic Arrays (FPLAs), and

—Field Programmable Interconnects (FPICs).

Technical Notes: 1. 'Field programmable logic devices' are also known as field programmable gate or field programmable logic arrays.

2. Maximum number of digital input/outputs in 3A001.a.7.a is also referred to as maximum user input/outputs or maximum available input/outputs, whether the integrated circuit is packaged or bare die.

* * * * *

a.10. Custom integrated circuits for which the function is unknown, or the control status of the equipment in which the integrated circuits will be used is unknown to the manufacturer, having any of the following:

a.10.a. More than 1,500 terminals;

a.10.b. A typical ''basic gate propagation delay time'' of less than 0.02 ns; or

a.10.c. An operating frequency exceeding 3 GHz;

* * * * *

b. * * *

b.8. Microwave power amplifiers containing tubes controlled by 3A001.b.1 and having all of the following:

b.8.a. Operating frequencies above 3 GHz;

b.8.b. An average output power *to mass ratio* exceeding 80 W/kg; *and*

b.8.c. A volume of less than 400 cm^3;

Note: 3A001.b.8 does not control equipment designed or rated for operation in any frequency band which is ''allocated by the ITU'' for radio-communications services, but not for radio-determination.

* * * * *

b.9. Microwave power modules (MPM) consisting of, at least, a traveling wave tube, a microwave ''monolithic integrated circuit'' and an integrated electronic power conditioner and having all of the following:

* * * * *

b.10. Oscillators or oscillator assemblies, designed to operate with all of the following:

b.10.a. A single sideband (SSB) phase noise, in dBc/Hz, better than $-(126+20 \log_{10}F-20 \log_{10}f)$ for 10 Hz <F<10 kHz; *and*

b.10.b. A single sideband (SSB) phase noise, in dBc/Hz, better than $-(114+20 \log_{10}F-20 \log_{10}f)$ for 10 kHz ≤ F < 500 kHz;

Technical Note: In 3A001.b.10, F is the offset from the operating frequency in Hz and f is the operating frequency in MHz.

c. Acoustic wave devices as follows and specially designed components therefor:

c.1. Surface acoustic wave and surface skimming (shallow bulk) acoustic wave devices, having any of the following:

c.1.a. A carrier frequency exceeding 6 GHz;

c.1.b. A carrier frequency exceeding 1 GHz, but not exceeding 6 GHz and having any of the following:

c.1.b.1. A 'frequency side-lobe rejection' exceeding 65 dB;

* * * * *

c.1.c. * * *

c.1.c.3. A 'frequency side-lobe rejection' exceeding 65 dB and a bandwidth greater than 100 MHz;

Technical Note: 'Frequency side-lobe rejection' is the maximum rejection value specified in data sheet.

c.2. Bulk (volume) acoustic wave devices that permit the direct processing of signals at frequencies exceeding 6 GHz;

c.3. Acoustic-optic ''signal processing'' devices employing interaction between acoustic waves (bulk wave or surface wave) and light waves that permit the direct processing of signals or images, including spectral analysis, correlation or convolution;

Note: 3A001.c does not control acoustic wave devices that are limited to a single band pass, low pass, high pass or notch filtering, or resonating function.

* * * * *

e. * * *

e.1. 'Cells' as follows:

* * * * *

e.1.b. 'Secondary cells' having an 'energy density' exceeding 250 Wh/kg at 293 K (20 °C);

* * * * *

e.4. Solar cells, cell-interconnect-coverglass (CIC) assemblies, solar panels, and solar arrays, which are ''space qualified,'' having a minimum average efficiency exceeding 20% at an operating temperature of 301 K (28 °C) under simulated 'AM0' illumination with an irradiance of 1,367 Watts per square meter (W/m^2);

* * * * *

f. Rotary input type absolute position encoders having an accuracy equal to or less (better) than ± 1.0 second of arc;

g. * * *

g.2. * * *

g.2.b. A peak (surge) current equal to or greater than 3,000 A;

* * * * *

h. Solid-state power semiconductor switches, diodes, or 'modules', having all of the following:

h.1. Rated for a maximum operating junction temperature greater than 488 K (215 °C);

h.2. Repetitive peak off-state voltage (blocking voltage) exceeding 300 V; *and*

h.3. Continuous current greater than 1 A.

Technical Note: For the purposes of 3A001.h, 'modules' contain one or more solid-state power semiconductor switches or diodes.

Note 1: Repetitive peak off-state voltage in 3A001.h includes drain to source voltage, collector to emitter voltage, repetitive peak reverse voltage and peak repetitive off-state blocking voltage.

Note 2: 3A001.h. includes:

—Junction Field Effect Transistors (JFETs)
—Vertical Junction Field Effect Transistors (VJFETs)
—Metal Oxide Semiconductor Field Effect Transistors (MOSFETs)
—Double Diffused Metal Oxide Semiconductor Field Effect Transistor (DMOSFET)
—Insulated Gate Bipolar Transistor (IGBT)
—High Electron Mobility Transistors (HEMTs)
—Bipolar Junction Transistors (BJTs)
—Thyristors and Silicon Controlled Rectifiers (SCRs)
—Gate Turn-Off Thyristors (GTOs)
—Emitter Turn-Off Thyristors (ETOs)
—PiN Diodes
—Schottky Diodes

Note 3: 3A001.h. does not apply to switches, diodes, or 'modules' incorporated into equipment designed for civil automobile, civil railway, or ''civil aircraft'' applications.

* * * * *

■ 30. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 3, ECCN 3A002 is amended by revising paragraphs a.6, d.3.a, and d.4 in the Items paragraph of the List of Items Controlled section to read as follows:

3A002 General purpose electronic equipment and accessories therefor, as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

* * * * *

a.6. Digital instrumentation data recorders using magnetic disk storage technique and having all of the following:

* * * * *

d. * * *

d.3. * * *

d.3.a. Less than 312 ps;

* * * * *

d.4. A maximum synthesized frequency exceeding 3.2 GHz and having all of the following:

d.4.a. A single sideband (SSB) phase noise, in dBc/Hz, better than $-(126+20 \log_{10}F-20 \log_{10}f)$ for 10 Hz < F < 10 kHz; *and*

d.4.b. A single sideband (SSB) phase noise, in dBc/Hz, better than $-(114+20\log_{10}F-20\log_{10}f)$ for 10 kHz ≤ F < 500 kHz;

Technical Note: In 3A002.d.4, F is the offset from the operating frequency in Hz and f is the operating frequency in MHz.

* * * * *

■ 31. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 3, ECCN 3B001 is amended by adding a new note to paragraph a.1 and revising paragraph f.3 introductory text in the Items paragraph of the List of Items Controlled section to read as follows:

3B001 Equipment for the manufacturing of semiconductor devices or materials, as follows (see List of Items Controlled) and specially designed components and accessories therefor.

* * * * *

List of Items Controlled

* * * * *

Items:

a. * * *

a.1. * * *

Note: 3B001.a.1 includes atomic layer epitaxy (ALE) equipment.

* * * * *

f.3. Equipment specially designed for mask making or semiconductor device processing using direct writing methods, having all of the following:

* * * * *

■ 32. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 4, ECCN 4D001 is amended by revising the Heading, the License Exception section, and the Items paragraph of the List of Items Controlled section to read as follows:

4D001 ''Software'' as follows (see List of Items Controlled).

* * * * *

License Exceptions

CIV: N/A

TSR: Yes, except for ''software'' for the ''development'' or ''production'' of commodities with an ''Adjusted Peak Performance'' (''APP'') exceeding 0.5 WT.

APP: Yes to specific countries (see § 740.7 of the EAR for eligibility criteria)

List of Items Controlled

* * * * *

Items:

a. ''Software'' specially designed or modified for the ''development'', ''production'' or ''use'' of equipment or ''software'' controlled by 4A001 to 4A004, or 4D (except 4D980, 4D993 or 4D994).

b. ''Software'', other than that controlled by 4D001.a, specially designed or modified for the ''development'' or ''production'' of equipment as follows:

b.1. ''Digital computers'' having an ''Adjusted Peak Performance'' (''APP'') exceeding 0.1 Weighted TeraFLOPS (WT);

b.2. ''Electronic assemblies'' specially designed or modified for enhancing performance by aggregation of processors so that the ''APP'' of the aggregation exceeds the limit in 4D001.b.1.

* * * * *

■ 33. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 4, ECCN 4D003 is amended by revising the Heading, the TSR paragraph of the License Exception section, and the Related Controls and Items paragraphs of the List of Items Controlled section to read as follows:

4D003 ''Software'' having characteristics or performing functions exceeding the limits in Category 5, Part 2 (''Information Security'').

* * * * *

License Exceptions

CIV: * * *

TSR: N/A

List of Items Controlled

Unit: * * *

Related Controls: See Category 5, Part 2 for the control status of ''software'' in this entry. *See also 4D993.*

Related Definitions: * * *

Items:

The list of items controlled is contained in the ECCN heading.

* * * * *

■ 34. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 4, ECCN 4E001 is amended by revising the Heading, the TSR paragraph of the License Exception section, and the Items paragraph of the List of Items Controlled section to read as follows:

4E001 ''Technology'' as follows (see List of Items Controlled).

* * * * *

License Exceptions

CIV: * * *

TSR: Yes, except for ''technology'' for the ''development'' or ''production'' of commodities with an ''Adjusted Peak Performance'' (''APP'') exceeding 0.5 WT.

APP: * * *

List of Items Controlled

* * * * *

Items:

a. ''Technology'' according to the General Technology Note, for the ''development'', ''production'', or ''use'' of equipment or ''software'' controlled by 4A (except 4A980 or 4A994) or 4D (except 4D980, 4D993, 4D994).

b. ''Technology'', other than that controlled by 4E001.a, specially designed or modified for the ''development'' or ''production'' of equipment as follows:

b.1. ''Digital computers'' having an ''Adjusted Peak Performance'' (''APP'') exceeding 0.1 Weighted TeraFLOPS (WT);

b.2. ''Electronic assemblies'' specially designed or modified for enhancing performance by aggregation of processors so that the ''APP'' of the aggregation exceeds the limit in 4E001.b.1.

* * * * *

■ 35. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 5, Part 1, ECCN 5A001 is amended by

■ a. Revising the License Requirement section;

■ b. Revising the License Exception section;

■ c. Revising paragraphs f and g in the Items paragraph of the of the List of Items Controlled section, as set forth below;

■ d. Adding a new paragraph h to the Items paragraph of the List of Items Controlled section, to read as follows:

5A001 Telecommunications systems, equipment, components and accessories, as follows (*see* List of Items Controlled).

License Requirements

Reason for Control: NS, AT.

Control(s)	Country chart
NS applies to 5A001.a, and .e.	NS Column 1.
NS applies to 5A001.b, .c, .d, .f, .g, .h.	NS Column 2.
AT applies to entire entry ..	AT Column 1.

License Requirement Notes: See § 743.1 of the EAR for reporting requirements for exports under License Exceptions.

License Exceptions

LVS: N/A for 5A001.a, b.5, .e

$5000 for 5A001b.1, b.2, b.3, b.6, and .d through .h

$3000 for 5A001.c

* * * * *

List of Items Controlled

* * * * *

Items:

* * * * *

f. Jamming equipment specially designed or modified to intentionally and selectively interfere with, deny, inhibit, degrade or seduce mobile telecommunication services and perform any of the following, and specially designed components therefore:

f.1. Simulate the functions of Radio Access Network (RAN) equipment;

f.2. Detect and exploit specific characteristics of the mobile telecommunications protocol employed (*e.g.,* GSM); or

f.3. Exploit specific characteristics of the mobile telecommunications protocol employed (*e.g.,* GSM);

N.B.: For GNSS jamming equipment see the International Traffic in Arms Regulations (ITAR) (22 CFR Parts 120–130).

g. Passive Coherent Location (PCL) systems or equipment, specially designed for detecting and tracking moving objects by measuring reflections of ambient radio frequency emissions, supplied by non-radar transmitters.

Technical Note: Non-radar transmitters may include commercial radio, television or cellular telecommunications base stations.

Note: 5A001.g does not control:

a. Radio-astronomical equipment; or

b. Systems or equipment, that require any radio transmission from the target.

h. Electronic equipment designed or modified to prematurely activate or prevent the initiation of Radio Controlled Improvised Explosive Devices (RCIED).

N.B.: See also Category XI of the International Traffic in Arms Regulations (ITAR) (22 CFR Parts 120–130).

* * * * *

■ 36. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 5, Part I,ECCN 5B001 is amended by revising the Heading and the Items paragraph of the List of Items Controlled section to read as follows:

5B001 Telecommunication test, inspection and production equipment, components and accessories, as follows (See List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

a. Equipment and specially designed components or accessories therefor, specially designed for the ''development'', ''production'' or ''use'' of equipment, functions or features, controlled by 5A001;

Note: 5B001.a does not control optical fiber characterization equipment.

b. Equipment and specially designed components or accessories therefor, specially designed for the ''development'' of any of the following telecommunication transmission or switching equipment:

b.1. Equipment employing digital techniques designed to operate at a ''total digital transfer rate'' exceeding 15 Gbit/s;

Technical Note: For switching equipment the ''total digital transfer rate'' is measured at the highest speed port or line.

b.2. Equipment employing a ''laser'' and having any of the following:

b.2.a. A transmission wavelength exceeding 1750 nm;

b.2.b. Performing ''optical amplification'' using praseodymium-doped fluoride fiber amplifiers (PDFFA);

b.2.c. Employing coherent optical transmission or coherent optical detection techniques (also called optical heterodyne or homodyne techniques); *or*

b.2.d. Employing analog techniques and having a bandwidth exceeding 2.5 GHz;

Note: 5B001.b.2.d. does not include equipment specially designed for the ''development'' of commercial TV systems.

b.3. Equipment employing ''optical switching'';

b.4. Radio equipment employing Quadrature-Amplitude-Modulation (QAM) techniques above level 256; *or*

b.5. Equipment employing ''common channel signaling'' operating in non-associated mode of operation.

* * * * *

■ 37. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 5, Part I,ECCN 5D001 is amended by revising the Heading and the Items paragraph of the List of Items Controlled section to read as follows:

5D001 ''Software'' as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

a. ''Software'' specially designed or modified for the ''development'', ''production'' or ''use'' of equipment, functions or features, controlled by 5A001;

b. ''Software'' specially designed or modified to support ''technology'' controlled by 5E001;

c. Specific ''software'' specially designed or modified to provide characteristics, functions or features of equipment, controlled by 5A001 or 5B001;

d. ''Software'' specially designed or modified for the ''development'' of any of the following telecommunication transmission or switching equipment:

d.1. Equipment employing digital techniques, including designed to operate at a ''total digital transfer rate'' exceeding 15 Gbit/s;

Technical Note: For switching equipment the ''total digital transfer rate'' is measured at the highest speed port or line.

d.2. Equipment employing a ''laser'' and having any of the following:

d.2.a. A transmission wavelength exceeding 1,750 nm; or

d.2.b. Employing analog techniques and having a bandwidth exceeding 2.5 GHz;

Note: 5D001.d.2.b. does not control ''software'' specially designed or modified for the ''development'' of commercial TV systems.

d.3. Equipment employing ''optical switching''; or

d.4. Radio equipment employing Quadrature-Amplitude-Modulation (QAM) techniques above level 256.

* * * * *

■ 38. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 5, Part I,ECCN 5E001 is amended by revising the Heading and the Items paragraph of the List of Items Controlled section to read as follows:

5E001 ''Technology'' as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

a. ''Technology'' according to the General Technology Note for the ''development'', ''production'' or ''use'' (excluding operation) of equipment, functions or features, controlled by 5A001 or ''software'' controlled by 5D001.a.

b. Specific ''technology'' as follows:

b.1. ''Required'' ''technology'' for the ''development'' or ''production'' of telecommunications equipment specially designed to be used on board satellites;

b.2. ''Technology'' for the ''development'' or ''use'' of ''laser'' communication techniques with the capability of automatically acquiring and tracking signals and maintaining communications through exoatmosphere or sub-surface (water) media;

b.3. ''Technology'' for the ''development'' of digital cellular radio base station receiving equipment whose reception capabilities that allow multi-band, multi-channel, multi-mode, multi-coding algorithm or multi-protocol operation can be modified by changes in ''software'';

b.4. ''Technology'' for the ''development'' of ''spread spectrum'' techniques, including ''frequency hopping'' techniques;

c. ''Technology'' according the General Technology Note for the ''development'' or ''production'' of any of the following:

c.1. Equipment employing digital techniques designed to operate at a ''total digital transfer rate'' exceeding 15 Gbit/s;

Technical Note: For switching equipment the ''total digital transfer rate'' is measured at the highest speed port or line.

c.2. Equipment employing a ''laser'' and having any of the following:

c.2.a. A transmission wavelength exceeding 1,750 nm;

c.2.b. Performing ''optical amplification'' using Praseodymium-Doped Fluoride Fiber Amplifiers (PDFFA);

c.2.c. Employing coherent optical transmission or coherent optical detection techniques (also called optical heterodyne or homodyne techniques);

c.2.d. Employing wavelength division multiplexing techniques of optical carriers at less than 100 GHz spacing; *or*

c.2.e. Employing analog techniques and having a bandwidth exceeding 2.5 GHz;

Note: 5E001.c.2.e. does not control ''technology'' for the ''development'' or ''production'' of commercial TV systems.

N.B.: For ''technology'' for the ''development'' or ''production'' of non-telecommunications equipment employing a ''laser'', see Product Group E of Category 6, e.g., 6E00x.

c.3. Equipment employing ''optical switching''; *or*

c.4. Radio equipment having any of the following:

c.4.a. Quadrature-Amplitude-Modulation (QAM) techniques above level 256; *or*

c.4.b. Operating at input or output frequencies exceeding 31.8 GHz; *or*

Note: 5E001.c.4.b. does not control ''technology'' for the ''development'' or ''production'' of equipment designed or modified for operation in any frequency band which is ''allocated by the ITU'' for radio-communications services, but not for radio-determination.

c.4.c. Operating in the 1.5 MHz to 87.5 MHz band and incorporating adaptive techniques providing more than 15 dB suppression of an interfering signal;

c.5. Equipment employing ''common channel signaling'' operating in non-associated mode of operation; or

c.6. Mobile equipment having all of the following:

c.6.a. Operating at an optical wavelength greater than or equal to 200 nm and less than or equal to 400 nm; *and*

c.6.b. Operating as a ''local area network'';

d. ''Technology'' according to the General Technology Note for the ''development'' or ''production'' of Microwave Monolithic Integrated Circuit (MMIC) power amplifiers specially designed for telecommunications and having any of the following:

d.1. Rated for operation at frequencies exceeding 3.2 GHz up to and including 6 GHz and with an average output power greater than 4 W (36 dBm) with a ''fractional bandwidth'' greater than 15%;

d.2. Rated for operation at frequencies exceeding 6 GHz up to and including 16 GHz and with an average output power greater than 1 W (30 dBm) with a ''fractional bandwidth'' greater than 10%;

d.3. Rated for operation at frequencies exceeding 16 GHz up to and including 31.8 GHz and with an average output power greater than 0.8 W (29 dBm) with a ''fractional bandwidth'' greater than 10%;

d.4. Rated for operation at frequencies exceeding 31.8 GHz up to and including 37.5 GHz;

d.5. Rated for operation at frequencies exceeding 37.5 GHz up to and including 43.5 GHz and with an average output power greater than 0.25 W (24 dBm) with a ''fractional bandwidth'' greater than 10%; *or*

d.6. Rated for operation at frequencies exceeding 43.5 GHz;

e. ''Technology'' according to the General Technology Note for the ''development'' or ''production'' of electronic devices and circuits, specially designed for telecommunications and containing components manufactured from ''superconductive'' materials, specially designed for operation at temperatures below the ''critical temperature'' of at least one of the ''superconductive'' constituents and having any of the following:

e.1. Current switching for digital circuits using ''superconductive'' gates with a product of delay time per gate (in seconds) and power dissipation per gate (in watts) of less than 10^{-14} J; *or*

e.2. Frequency selection at all frequencies using resonant circuits with Q-values exceeding 10,000.

* * * * *

■ 39. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 5, Part II, ECCN 5A002 is amended by:

■ a. Revising the Note at the beginning of the Items paragraph of the List of Items Controlled section;

■ b. Revising paragraph a.7 in the Items paragraph in the List of Items Controlled section to read as follows:

5A002 ''Information security'' systems, equipment and components therefor, as follows (see List of Items Controlled)

* * * * *

List of Items Controlled

* * * * *

Items:

Note: 5A002 does not control any of the following. However, these items are instead controlled under 5A992:

a. ''Personalized smart cards'' having any of the following:

1. Where the cryptographic capability is restricted for use in equipment or systems excluded from entries (b) through (g) of this Note; or

2. For general public-use applications where the cryptographic capability is not user-accessible and it is specially designed and limited to allow protection of personal data stored within;

N.B.: If a ''personalized smart card'' has multiple functions, the status of each function is assessed individually.

b. Receiving equipment for radio broadcast, pay television or similar restricted audience broadcast of the consumer type, without digital encryption except that exclusively used for sending the billing or program-related information back to the broadcast providers;

c. Equipment where the cryptographic capability is not user-accessible and which is specially designed and limited to allow any of the following:

1. Execution of copy-protected ''software'';

2. Access to any of the following:

a. Copy-protected contents stored on read-only media; or

b. Information stored in encrypted form on media (e.g., in connection with the protection of intellectual property rights) where the media is offered for sale in identical sets to the public;

3. Copying control of copyright protected audio/video data; or

4. Encryption and/or decryption for protection of libraries, design attributes, or associated data for the design of semiconductor devices or integrated circuits;

d. Cryptographic equipment specially designed and limited for banking use or 'money transactions';

Technical Note: The term 'money transactions' includes the collection and settlement of fares or credit functions.

e. Portable or mobile radiotelephones for civil use (e.g., for use with commercial civil cellular radio communication systems) that are not capable of transmitting encrypted data directly to another radiotelephone or equipment (other than Radio Access Network (RAN) equipment), nor of passing encrypted data through RAN equipment (e.g., Radio Network Controller (RNC) or Base Station Controller (BSC));

f. Cordless telephone equipment not capable of end-to-end encryption where the maximum effective range of unboosted cordless operation (e.g., a single, unrelayed hop between terminal and home base station) is less than 400 meters according to the manufacturer's specifications;

g. Portable or mobile radiotelephones and similar client wireless devices for civil use, that implement only published or commercial cryptographic standards (except for anti-piracy functions, which may be non-published) and also meet the provisions of paragraphs b. to d. of the Cryptography Note (Note 3 in Category 5—Part 2), that have been customized for a specific civil industry application with features that do not affect the cryptographic functionality of these original non-customized devices;

h. Equipment specially designed for the servicing of portable or mobile radiotelephones and similar client wireless devices that meet all the provisions of the Cryptography Note (Note 3 in Category 5, Part 2), where the servicing equipment meets all of the following:

1. The cryptographic functionality of the servicing equipment cannot easily be changed by the user of the equipment;

2. The servicing equipment is designed for installation without further substantial support by the supplier; and

3. The servicing equipment cannot change the cryptographic functionality of the device being serviced; or

i. Wireless ''personal area network'' equipment that implement only published or commercial cryptographic standards and where the cryptographic capability is limited to a nominal operating range not exceeding 30 metres according to the manufacturer's specifications.

a. * * *

a.7. Non-cryptographic information and communications technology (ICT) security systems and devices evaluated to an assurance level exceeding class EAL–6 (evaluation assurance level) of the Common Criteria (CC) or equivalent;

* * * * *

■ 40. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 5, Part II, ECCN 5B002 is amended by revising the Heading and the Items paragraph of the List of Items Controlled section, to read as follows:

5B002 ''Information Security'' test, inspection and ''production'' equipment, as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

a. Equipment specially designed for the ''development'' or ''production'' of equipment controlled by 5A002 or 5B002.b;

b. Measuring equipment specially designed to evaluate and validate the ''information security'' functions of equipment controlled by 5A002 or ''software'' controlled by 5D002.a or 5D002.c.

* * * * *

■ 41. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 5, Part II, ECCN 5D002 is amended by revising the Heading and the Items paragraph of the List of Items Controlled section, to read as follows:

5D002 ''Software'' as follows (see List of Items Controlled)

* * * * *

List of Items Controlled

* * * * *

Items:

a. ''Software'' specially designed or modified for the ''development'', ''production'' or ''use'' of equipment

controlled by 5A002 or ''software'' controlled by 5D002.c;

b. ''Software'' specially designed or modified to support ''technology'' controlled by 5E002;

c. Specific ''software'' as follows:

c.1. ''Software'' having the characteristics, or performing or simulating the functions of the equipment, controlled by 5A002;

c.2. ''Software'' to certify ''software'' controlled by 5D002.c.1.

* * * * *

■ 42. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 5, Part II, ECCN 5E002 is amended by revising the Heading, the EI paragraph and the License Requirement Note in the License Requirements section, to read as follows:

5E002 ''Technology'' according to the General Technology Note for the ''development'', ''production'' or ''use'' of equipment controlled by 5A002 or 5B002 or ''software'' controlled by 5D002.a or 5D002.c.

License Requirements

* * * * *

EI applies to ''technology'' for the ''development,'' ''production,'' or ''use'' of commodities or ''software'' controlled for EI reasons in ECCNs 5A002 or 5D002.a or 5D002.c. Refer to § 742.15 of the EAR.

License Requirement Note: When a person performs or provides technical assistance that incorporates, or otherwise draws upon, ''technology'' that was either obtained in the United States or is of US-origin, then a release of the ''technology'' takes place. Such technical assistance, when rendered with the intent to aid in the ''development'' or ''production'' of encryption commodities or software that would be controlled for ''EI'' reasons under ECCN 5A002 or 5D002.a or 5D002.c, may require authorization under the EAR even if the underlying encryption algorithm to be implemented is from the public domain or is not of U.S. origin.

* * * * *

■ 43. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 6, ECCN 6A001 is amended by:

■ a. Revising the License Exception section;

■ b. Revising paragraph b.2 in the Items paragraph of the List of Items Controlled section; and

■ c. Adding a new paragraph c to read as follows:

6A001 Acoustic systems, equipment and components, as follows (see List of Items Controlled).

* * * * *

License Exceptions

LVS: $3000; N/A for 6A001.a.1.b.1 object detection and location systems having a transmitting frequency below 5 kHz or a sound pressure level exceeding 210 dB (reference 1 μPa at 1 m) for equipment with an operating frequency in the band from 30 kHz to 2 kHz inclusive; 6A001.a.2.a.1, a.2.a.2, 6A001.a.2.a.3, a.2.a.5, a.2.a.6, 6A001.a.2.b; processing equipment controlled by 6A001.a.2.c, and specially designed for real time application with towed acoustic hydrophone arrays; a.2.e.1, a.2.e.2; and bottom or bay cable systems controlled by 6A001.a.2.f and having processing equipment specially designed for real time application with bottom or bay cable systems.

$5,000: 6A001.c

GBS: Yes for 6A001.a.1.b.4 and .c

CIV: Yes for 6A001.a.1.b.4 and .c

List of Items Controlled

* * * * *

Items:

* * * * *

Note: 6A001.a.1 does not control equipment as follows: * * *

b. * * *

b.2. Doppler-velocity sonar log equipment having speed accuracy better than 1% of speed;

Note: 6A001.b does not apply to depth sounders limited to any of the following:

a. Measuring the depth of water;

b. Measuring the distance of submerged or buried objects; or

c. Fish finding.

Note: 6A001.b. does not apply to equipment specially designed for installation on surface vessels.

c. Diver deterrent acoustic systems specially designed or modified to disrupt divers and having a sound pressure level equal to or exceeding 190 dB (reference 1 μPa at 1 m) at frequencies of 200Hz and below.

Note: 6A001.c does not apply to diver deterrent systems based on underwater explosive devices, air guns or combustible sources.

Note: 6A001.c includes diver deterrent acoustic systems that use spark gap sources, also known as plasma sound sources.

* * * * *

■ 44. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 6, ECCN 6A004 is amended by revising the Heading and the Items paragraph of the List of Items Controlled section, to read as follows:

6A004 Optical equipment and components, as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

a. Optical mirrors (reflectors) as follows:

a.1. ''Deformable mirrors'' having either continuous or multi-element surfaces, and specially designed components therefor, capable of dynamically repositioning portions of the surface of the mirror at rates exceeding 100 Hz;

a.2. Lightweight monolithic mirrors having an average ''equivalent density'' of less than 30 kg/m^2 and a total mass exceeding 10 kg;

a.3. Lightweight ''composite'' or foam mirror structures having an average ''equivalent density'' of less than 30 kg/m^2 and a total mass exceeding 2 kg;

a.4. Beam steering mirrors more than 100 mm in diameter or length of major axis, that maintain a flatness of λ/2 or better (λ is equal to 633 nm) having a control bandwidth exceeding 100 Hz;

b. Optical components made from zinc selenide (ZnSe) or zinc sulphide (ZnS) with transmission in the wavelength range exceeding 3,000 nm but not exceeding 25,000 nm and having any of the following:

b.1. Exceeding 100 cm^3 in volume; *or*

b.2. Exceeding 80 mm in diameter or length of major axis and 20 mm in thickness (depth);

c. ''Space-qualified'' components for optical systems, as follows:

c.1. Components lightweighted to less than 20% ''equivalent density'' compared with a solid blank of the same aperture and thickness;

c.2. Raw substrates, processed substrates having surface coatings (single-layer or multi-layer, metallic or dielectric, conducting, semiconducting or insulating) or having protective films;

c.3. Segments or assemblies of mirrors designed to be assembled in space into an optical system with a collecting aperture equivalent to or larger than a single optic 1 m in diameter;

c.4. Components manufactured from ''composite'' materials having a coefficient of linear thermal expansion equal to or less than 5×10^{-6} in any coordinate direction;

d. Optical control equipment as follows:

d.1. Equipment specially designed to maintain the surface figure or orientation of the ''space-qualified'' components controlled by 6A004.c.1 or 6A004.c.3;

d.2. Equipment having steering, tracking, stabilization or resonator alignment bandwidths equal to or more than 100 Hz and an accuracy of 10 μrad (microradians) or less;

d.3. Gimbals having all of the following:

d.3.a. A maximum slew exceeding 5°;

d.3.b. A bandwidth of 100 Hz or more;

d.3.c. Angular pointing errors of 200 μrad (microradians) or less; and

d.3.d. Having any of the following:

d.3.d.1. Exceeding 0.15 m but not exceeding 1 m in diameter or major axis length and capable of angular accelerations exceeding 2 rad (radians)/s^2; or

d.3.d.2. Exceeding 1 m in diameter or major axis length and capable of angular accelerations exceeding 0.5 rad (radians)/s^2;

d.4. Specially designed to maintain the alignment of phased array or phased segment mirror systems consisting of mirrors with a segment diameter or major axis length of 1 m or more;

e. 'Aspheric optical elements' having all of the following:

e.1. Largest dimension of the optical-aperture greater than 400 mm;

e.2. Surface roughness less than 1 nm (rms) for sampling lengths equal to or greater than 1 mm; *and*

e.3. Coefficient of linear thermal expansion's absolute magnitude less than3×10^{-6}/K at 25 °C.

Technical Note:

1. [See Related Definitions section of this ECCN]

2. Manufacturers are not required to measure the surface roughness listed in

6A004.e.2 unless the optical element was designed or manufactured with the intent to meet, or exceed, the control parameter.

Note: 6A004.e does not control 'aspheric optical elements' having any of the following:

a. Largest optical-aperture dimension less than 1 m and focal length to aperture ratio equal to or greater than 4.5:1;

b. Largest optical-aperture dimension equal to or greater than 1 m and focal length to aperture ratio equal to or greater than 7:1;

c. Designed as Fresnel, flyeye, stripe, prism or diffractive optical elements;

d. Fabricated from borosilicate glass having a coefficient of linear thermal expansion greater than $2.5 \times 10^{-6/K}$ at 25 ° C; or

e. An x-ray optical element having inner mirror capabilities (e.g., tube-type mirrors).

* * * * *

■ 45. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 6, ECCN 6A005 is amended by revising the Items paragraph of the List of Items Controlled section, to read as follows:

6A005 ''Lasers'' (other than those described in 0B001.g.5 or .h.6), components and optical equipment, as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

Note:

1. Pulsed ''lasers'' include those that run in a continuous wave (CW) mode with pulses superimposed.

2. Eximer, semiconductor, chemical, CO, CO_2, and non-repetitive pulsed Nd:glass ''lasers'' are only specified by 6A005.d.

3. 6A005 includes fiber ''lasers''.

4. The control status of ''lasers'' incorporating frequency conversion (i.e., wavelength change) by means other than one ''laser'' pumping another ''laser'' is determined by applying the control parameters for both the output of the source ''laser'' and the frequency-converted optical output.

5. 6A005 does not control ''lasers'' as follows:

a. Ruby with output energy below 20 J;

b. Nitrogen;

c. Krypton.

a. Non-''tunable'' continuous wave ''(CW) lasers'' having any of the following:

a.1. Output wavelength less than 150 nm and output power exceeding 1W;

a.2. Output wavelength of 150 nm or more but not exceeding 520 nm and output power exceeding 30 W;

Note: 6A005.a.2 does not control Argon ''lasers'' having an output power equal to or less than 50 W.

a.3. Output wavelength exceeding 520 nm but not exceeding 540 nm and any of the following:

a.3.a. Single transverse mode output and output power exceeding 50 W; or

a.3.b. Multiple transverse mode output and output power exceeding 150 W;

a.4. Output wavelength exceeding 540 nm but not exceeding 800 nm and output power exceeding 30 W;

a.5. Output wavelength exceeding 800 nm but not exceeding 975 nm and any of the following:

a.5.a. Single transverse mode output and output power exceeding 50 W; or

a.5.b. Multiple transverse mode output and output power exceeding 80 W;

a.6. Output wavelength exceeding 975 nm but not exceeding 1,150 nm and any of the following;

a.6.a. Single transverse mode output and any of the following:

a.6.a.1. 'Wall-plug efficiency' exceeding 12% and output power exceeding 100 W; or

a.6.a.2. Output power exceeding 150 W; or

a.6.b. Multiple transverse mode output and any of the following:

a.6.b.1. 'Wall-plug efficiency' exceeding 18% and output power exceeding 500 W; or

a.6.b.2. Output power exceeding 2 kW;

Note: 6A005.a.6.b does not control multiple transverse mode, industrial ''lasers'' with output power exceeding 2kW and not exceeding 6 kW with a total mass greater than 1,200 kg. For the purpose of this note, total mass includes all components required to operate the ''laser'', e.g., ''laser'', power supply, heat exchanger, but excludes external optics for beam conditioning and/or delivery.

a.7. Output wavelength exceeding 1,150 nm but not exceeding 1,555 nm and any of the following:

a.7.a. Single transverse mode and output power exceeding 50 W; or

a.7.b. Multiple transverse mode and output power exceeding 80 W; or

a.8. Output wavelength exceeding 1,555 nm and output power exceeding 1 W;

b. Non-''tunable'' ''pulsed lasers'' having any of the following;

b.1. Output wavelength less than 150 nm and any of the following:

b.1.a. Output energy exceeding 50 mJ per pulse and ''peak power'' exceeding 1 W; or

b.1.b. ''Average output power'' exceeding 1 W;

b.2. Output wavelength of 150 nm or more but not exceeding 520 nm and any of the following:

b.2.a. Output energy exceeding 1.5 J per pulse and ''peak power'' exceeding 30 W; or

b.2.b. ''Average output power'' exceeding 30 W;

Note: 6A005.b.2.b does not control Argon ''lasers'' having an ''average output power'' equal to or less than 50 W.

b.3. Output wavelength exceeding 520 nm, but not exceeding 540 nm and any of the following:

b.3.a. Single transverse mode output and any of the following:

b.3.a.1. Output energy exceeding 1.5 J per pulse and ''peak power'' exceeding 50 W; *or*

b.3.a.2. ''Average output power'' exceeding 50 W; *or*

b.3.b. Multiple transverse mode output and any of the following:

b.3.b.1. Output energy exceeding 1.5 J per pulse and ''peak power'' exceeding 150 W; *or*

b.3.b.2. ''Average output power'' exceeding 150 W;

b.4. Output wavelength exceeding 540 nm but not exceeding 800 nm and any of the following:

b.4.a. Output energy exceeding 1.5 J per pulse and ''peak power'' exceeding 30 W; or

b.4.b. ''Average output power'' exceeding 30 W;

b.5. Output wavelength exceeding 800 nm but not exceeding 975 nm and any of the following:

b.5.a. ''Pulse duration'' not exceeding 1 μs and any of the following:

b.5.a.1. Output energy exceeding 0.5 J per pulse and ''peak power'' exceeding 50 W;

b.5.a.2. Single transverse mode output and ''average output power'' exceeding 20 W; *or*

b.5.a.3. Multiple transverse mode output and ''average output power'' exceeding 50 W; *or*

b.5.b. ''Pulse duration'' exceeding 1 μs and any of the following:

b.5.b.1. Output energy exceeding 2 J per pulse and ''peak power'' exceeding 50 W;

b.5.b.2. Single transverse mode output and ''average output power'' exceeding 50 W; *or*

b.5.b.3. Multiple transverse mode output and ''average output power'' exceeding 80 W.

b.6. Output wavelength exceeding 975 nm but not exceeding 1,150 nm and any of the following:

b.6.a. ''Pulse duration'' of less than 1 ns and any of the following:

b.6.a.1. Output ''peak power'' exceeding 5 GW per pulse;

b.6.a.2. ''Average output power'' exceeding 10 W; or

b.6.a.3. Output energy exceeding 0.1 J per pulse;

b.6.b. ''Pulse duration'' equal to or exceeding 1 ns but not exceeding 1 μs and any of the following:

b.6.b.1. Single transverse mode output and any of the following:

b.6.b.1.a. ''Peak power'' exceeding 100 MW;

b.6.b.1.b. ''Average output power'' exceeding 20 W limited by design to a maximum pulse repetition frequency less than or equal to 1 kHz;

b.6.b.1.c. 'Wall-plug efficiency' exceeding 12%, ''average output power'' exceeding 100 W and capable of operating at a pulse repetition frequency greater than 1 kHz;

b.6.b.1.d. ''Average output power'' exceeding 150 W and capable of operating at a pulse repetition frequency greater than 1 kHz; *or*

b.6.b.1.e. Output energy exceeding 2 J per pulse; or

b.6.b.2. Multiple transverse mode output and any of the following:

b.6.b.2.a. ''Peak power'' exceeding 400 MW;

b.6.b.2.b. 'Wall-plug efficiency' exceeding 18% and ''average output power'' exceeding 500 W;

b.6.b.2.c. ''Average output power'' exceeding 2 kW; or

b.6.b.2.d. Output energy exceeding 4 J per pulse; or

b.6.c. ''Pulse duration'' exceeding 1 μs and any of the following:

b.6.c.1. Single transverse mode output and any of the following:

b.6.c.1.a. ''Peak power'' exceeding 500 kW;

b.6.c.1.b. 'Wall-plug efficiency' exceeding 12% and ''average output power'' exceeding 100 W; *or*

b.6.c.1.c. ''Average output power'' exceeding 150 W; *or*

b.6.c.2. Multiple transverse mode output and any of the following:

b.6.c.2.a. ''Peak power'' exceeding 1 MW;

b.6.c.2.b. 'Wall-plug efficiency' exceeding 18% and ''average output power'' exceeding 500 W; *or*

b.6.c.2.c. ''Average output power'' exceeding 2 kW;

b.7. Output wavelength exceeding 1,150 nm but not exceeding 1,555 nm and any of the following:

b.7.a. ''Pulse duration'' not exceeding 1 μs and any of the following:

b.7.a.1. Output energy exceeding 0.5 J per pulse and ''peak power'' exceeding 50 W;

b.7.a.2. Single transverse mode output and ''average output power'' exceeding 20 W; *or*

b.7.a.3. Multiple transverse mode output and ''average output power'' exceeding 50 W; *or*

b.7.b. ''Pulse duration'' exceeding 1 μs and any of the following:

b.7.b.1. Output energy exceeding 2 J per pulse and ''peak power'' exceeding 50 W;

b.7.b.2. Single transverse mode output and ''average output power'' exceeding 50 W; *or*

b.7.b.3. Multiple transverse mode output and ''average output power'' exceeding 80 W; *or*

b.8. Output wavelength exceeding 1,555 nm and any of the following:

b.8.a. Output energy exceeding 100 mJ per pulse and ''peak power'' exceeding 1 W; *or*

b.8.b. ''Average output power'' exceeding 1 W;

c. ''Tunable'' lasers having any of the following:

Note: 6A005.c includes titanium-sapphire (Ti: Al_20_3), thulium-YAG (Tm: YAG), thulium-YSGG (Tm:YSGG), alexandrite (Cr:$BeAl_20_4$), color center ''lasers'', dye ''lasers'', and liquid ''lasers''.

c.1. Output wavelength less than 600 nm and any of the following:

c.1.a. Output energy exceeding 50 mJ per pulse and ''peak power'' exceeding 1 W; *or*

c.1.b. Average or CW output power exceeding 1W;

c.2. Output wavelength of 600 nm or more but not exceeding 1,400 nm, and any of the following:

c.2.a. Output energy exceeding 1 J per pulse and ''peak power'' exceeding 20 W; *or*

c.2.b. Average or CW output power exceeding 20 W; *or*

c.3. Output wavelength exceeding 1,400 nm and any of the following:

c.3.a. Output energy exceeding 50 mJ per pulse and ''peak power'' exceeding 1 W; *or*

c.3.b. Average or CW output power exceeding 1 W;

d. Other ''lasers'', not controlled by 6A005.a, 6A005.b, or 6A005.c as follows:

d.1. Semiconductor ''lasers'' as follows:

Note: 1. 6A005.d.1 includes semiconductor ''lasers'' having optical output connectors (e.g., fiber optic pigtails).

2. The control status of semiconductor ''lasers'' specially designed for other equipment is determined by the control status of the other equipment.

d.1.a. Individual single-transverse mode semiconductor ''lasers'' having any of the following:

d.1.a.1. Wavelength equal to or less than 1,510 nm and average or CW output power, exceeding 1.5 W; *or*

d.1.a.2. Wavelength greater than 1,510 nm and average or CW output power, exceeding 500 mW;

d.1.b. Individual, multiple-transverse mode semiconductor ''lasers'' having any of the following:

d.1.b.1. Wavelength of less than 1,400 nm and average or CW output power, exceeding 10 W;

d.1.b.2. Wavelength equal to or greater than 1,400 nm and less than 1,900 nm and average or CW output power, exceeding 2.5 W; *or*

d.1.b.3. Wavelength equal to or greater than 1,900 nm and average or CW output power, exceeding 1 W;

d.1.c. Individual semiconductor ''laser'' 'arrays' having any of the following:

d.1.c.1. Wavelength of less than 1,400 nm and average or CW output power, exceeding 80 W;

d.1.c.2. Wavelength equal to or greater than 1,400 nm and less than 1,900 nm and average or CW output power, exceeding 25 W; *or*

d.1.c.3. Wavelength equal to or greater than 1,900 nm and average or CW output power, exceeding 10 W;

d.1.d. 'Array stacks' of semiconductor ''lasers'' containing at least one 'array' controlled by 6A005.d.1.c;

Technical Note: 1. Semiconductor ''lasers'' are commonly called ''laser'' diodes.

2. An 'array' consists of multiple semiconductor ''laser'' emitters fabricated as a single chip so that the centers of the emitted light beams are on parallel paths.

3. An 'array stack' is fabricated by stacking, or otherwise assembling, 'arrays' so that the centers of the emitted light beams are on parallel paths.

d.2. Carbon monoxide (CO) ''lasers'' having any of the following:

d.2.a. Output energy exceeding 2 J per pulse and ''peak power'' exceeding 5 kW; *or*

d.2.b. Average or CW output power, exceeding 5 kW;

d.3. Carbon dioxide (CO_2) ''lasers'' having any of the following:

d.3.a. CW output power exceeding 15 kW;

d.3.b. Pulsed output with ''pulse duration'' exceeding 10 μs and any of the following:

d.3.b.1. ''Average output power'' exceeding 10 kW; *or*

d.3.b.2. ''Peak power'' exceeding 100 kW; *or*

d.3.c. Pulsed output with a ''pulse duration'' equal to or less than 10 μs and any of the following:

d.3.c.1. Pulse energy exceeding 5 J per pulse; *or*

d.3.c.2. ''Average output power'' exceeding 2.5 kW;

d.4. Excimer ''lasers'' having any of the following:

d.4.a. Output wavelength not exceeding 150 nm and any of the following:

d.4.a.1. Output energy exceeding 50 mJ per pulse; *or*

d.4.a.2. ''Average output power'' exceeding 1 W;

d.4.b. Output wavelength exceeding 150 nm but not exceeding 190 nm and any of the following:

d.4.b.1. Output energy exceeding 1.5 J per pulse; *or*

d.4.b.2. ''Average output power'' exceeding 120 W;

d.4.c. Output wavelength exceeding 190 nm but not exceeding 360 nm and any of the following:

d.4.c.1. Output energy exceeding 10 J per pulse; *or*

d.4.c.2. ''Average output power'' exceeding 500 W; *or*

d.4.d. Output wavelength exceeding 360 nm and any of the following:

d.4.d.1. Output energy exceeding 1.5 J per pulse; *or*

d.4.d.2. ''Average output power'' exceeding 30 W;

Note: For excimer ''lasers'' specially designed for lithography equipment, see 3B001.

d.5. ''Chemical lasers'' as follows:

d.5.a. Hydrogen Fluoride (HF) ''lasers'';

d.5.b. Deuterium Fluoride (DF) ''lasers'';

d.5.c. ''Transfer lasers'' as follows:

d.5.c.1. Oxygen Iodine (O_2-I) ''lasers'';

d.5.c.2. Deuterium Fluoride-Carbon dioxide (DF–CO_2) ''lasers'';

d.6. 'Non-repetitive pulsed' Neodymium (Nd) glass ''lasers'' having any of the following:

d.6.a. ''Pulse duration'' not exceeding 1 μs and output energy exceeding 50 J per pulse; *or*

d.6.b. ''Pulse duration'' exceeding 1 μs and output energy exceeding 100 J per pulse;

Note: 'Non-repetitive pulsed' refers to ''lasers'' that produce either a single output pulse or that have a time interval between pulses exceeding one minute.

e. Components as follows:

e.1. Mirrors cooled either by 'active cooling' or by heat pipe cooling;

Technical Note: 'Active cooling' is a cooling technique for optical components using flowing fluids within the subsurface (nominally less than 1 mm below the optical surface) of the optical component to remove heat from the optic.

e.2. Optical mirrors or transmissive or partially transmissive optical or electro-optical components, specially designed for use with controlled ''lasers'';

f. Optical equipment as follows:

N.B.: For shared aperture optical elements, capable of operating in ''Super-High Power Laser'' (''SHPL'') applications, see the U.S. Munitions List (22 CFR part 121).

f.1. Dynamic wavefront (phase) measuring equipment capable of mapping at least 50 positions on a beam wavefront and any the following:

f.1.a. Frame rates equal to or more than 100 Hz and phase discrimination of at least 5% of the beam's wavelength; *or*

f.1.b. Frame rates equal to or more than 1,000 Hz and phase discrimination of at least 20% of the beam's wavelength;

f.2. ''Laser'' diagnostic equipment capable of measuring ''SHPL'' system angular beam steering errors of equal to or less than 10 μrad;

f.3. Optical equipment and components, specially designed for a phased-array

''SHPL'' system for coherent beam combination to an accuracy of λ/10 at the designed wavelength, or 0.1 μm, whichever is the smaller;

f.4. Projection telescopes specially designed for use with ''SHPL'' systems.

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■ 46. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 6, ECCN 6A006 is amended by:

■ a. Revising the Heading;

■ b. Revising the LVS paragraph of the License Exception section; and

■ c. Revising the Items paragraph of the List of Items Controlled section, to read as follows:

6A006 ''Magnetometers'', ''magnetic gradiometers'', ''intrinsic magnetic gradiometers'', underwater electric field sensors, ''compensation systems'', and specially designed components therefor, as follows (see List of Items Controlled).

* * * * *

License Exceptions

LVS: $1500, N/A for 6A006.a.1; ''Magnetometers'' and subsystems defined in 6A006.a.2 using optically pumped or nuclear precession (proton/Overhauser) having a 'sensitivity' lower (better) than 2 pT (rms) per square root Hz; and 6A006.d.

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List of Items Controlled

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Items:

a. ''Magnetometers'' and subsystems, as follows:

a.1. ''Magnetometers'' using ''superconductive'' (SQUID) ''technology'' and having any of the following:

a.1.a. SQUID systems designed for stationary operation, without specially designed subsystems designed to reduce in-motion noise, and having a 'sensitivity' equal to or lower (better) than 50 fT (rms) per square root Hz at a frequency of 1 Hz; or

a.1.b. SQUID systems having an in-motion-magnetometer 'sensitivity' lower (better) than 20 pT (rms) per square root Hz at a frequency of 1 Hz and specially designed to reduce in-motion noise;

a.2. ''Magnetometers'' using optically pumped or nuclear precession (proton/Overhauser) ''technology'' having a 'sensitivity' lower (better) than 20 pT (rms) per square root Hz at a frequency of 1 Hz;

a.3. ''Magnetometers'' using fluxgate ''technology'' having a 'sensitivity' equal to or lower (better) than 10 pT (rms) per square root Hz at a frequency of 1 Hz;

a.4. Induction coil ''magnetometers'' having a 'sensitivity' lower (better) than any of the following:

a.4.a. 0.05 nT (rms)/square root Hz at frequencies of less than 1 Hz;

a.4.b. 1×10^{-3} nT (rms)/square root Hz at frequencies of 1 Hz or more but not exceeding 10 Hz; or

a.4.c. 1×10^{-4} nT (rms)/square root Hz at frequencies exceeding 10 Hz;

a.5. Fiber optic ''magnetometers'' having a 'sensitivity' lower (better) than 1 nT (rms) per square root Hz;

b. Underwater electric field sensors having a 'sensitivity' lower (better) than 8 nanovolt per meter per square root Hz when measured at 1 Hz;

c. ''Magnetic gradiometers'' as follows:

c.1. ''Magnetic gradiometers'' using multiple ''magnetometers'' controlled by 6A006.a;

c.2. Fiber optic ''intrinsic magnetic gradiometers'' having a magnetic gradient field 'sensitivity' lower (better) than 0.3 nT/m (rms) per square root Hz;

c.3. ''Intrinsic magnetic gradiometers'', using ''technology'' other than fiber-optic ''technology'', having a magnetic gradient field 'sensitivity' lower (better) than 0.015 nT/m (rms) per square root Hz; *and*

d. ''Compensation systems'' for magnetic and underwater electric field sensors resulting in a performance equal to or better than the control parameters of 6A006.a, 6A006.b, and 6A006.c.

Technical Note: For the purposes of 6A006, 'sensitivity' (noise level) is the root mean square of the device-limited noise floor which is the lowest signal that can be measured.

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■ 47. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 6, ECCN 6A008 is amended by revising the Heading and the Items paragraph of the List of Items Controlled section, to read as follows:

6A008 Radar systems, equipment and assemblies, having any of the following (see List of Items Controlled), and specially designed components therefor.

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List of Items Controlled

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Items:

Note: 6A008 does not control:

—Secondary surveillance radar (SSR);

—Civil Automotive Radar;

—Displays or monitors used for air traffic control (ATC) having no more than 12 resolvable elements per mm;

—Meteorological (weather) radar.

a. Operating at frequencies from 40 GHz to 230 GHz and having any of the following:

a.1. An ''average output power'' exceeding 100 mW; or

a.2. Locating accuracy of 1 m or less (better) in range and 0.2 degree or less (better) in azimuth;

b. A tunable bandwidth exceeding ±6.25% of the 'center operating frequency';

Technical Note: The 'center operating frequency' equals one half of the sum of the highest plus the lowest specified operating frequencies

c. Capable of operating simultaneously on more than two carrier frequencies;

d. Capable of operating in synthetic aperture (SAR), inverse synthetic aperture (ISAR) radar mode, or sidelooking airborne (SLAR) radar mode;

e. Incorporating ''electronically steerable phased array antennae'';

f. Capable of heightfinding non-cooperative targets;

Note: 6A008.f does not control precision approach radar (PAR) equipment conforming to ICAO standards

g. Specially designed for airborne (balloon or airframe mounted) operation and having Doppler ''signal processing'' for the detection of moving targets;

h. Employing processing of radar signals and using any of the following:

h.1. ''Radar spread spectrum'' techniques; *or*

h.2. ''Radar frequency agility'' techniques;

i. Providing ground-based operation with a maximum ''instrumented range'' exceeding 185 km;

Note: 6A008.i does not control:

a. Fishing ground surveillance radar;

b. Ground radar equipment specially designed for en route air traffic control, and having all of the following:

1. A maximum ''instrumented range'' of 500 km or less;

2. Configured so that radar target data can be transmitted only one way from the radar site to one or more civil ATC centers;

3. Contains no provisions for remote control of the radar scan rate from the en route ATC center; and

4. Permanently installed;

c. Weather balloon tracking radars.

j. Being ''laser'' radar or Light Detection and Ranging (LIDAR) equipment and having any of the following:

j.1. ''Space-qualified'';

j.2. Employing coherent heterodyne or homodyne detection techniques and having an angular resolution of less (better) than 20 μrad (microradians); or

j.3. Designed for carrying out airborne bathymetric littoral surveys to International Hydrographic Organization (IHO) Order 1a Standard (5th Edition February 2008) for Hydrographic Surveys or better, and using one or more lasers with a wavelength exceeding 400 nm but not exceeding 600 nm;

Note 1: LIDAR equipment specially designed for surveying is only specified by 6A008.j.3.

Note 2: 6A008.j does not apply to LIDAR equipment specially designed for meteorological observation.

Note 3: Parameters in the IHO Order 1a Standard 5th Edition February 2008 are summarized as follows:

Horizontal Accuracy (95% Confidence Level)= 5 m + 5% of depth.

Depth Accuracy for Reduced Depths (95% confidence level) = $\pm\sqrt{(a^2 + (b*d)^2)}$ where:

a = 0.5 m = constant depth error, i.e. the sum of all constant depth errors

b = 0.013 = factor of depth dependant error

b*d = depth dependant error, i.e. the sum of all depth dependant errors

d = depth

Feature Detection = Cubic features > 2 m in depths up to 40 m; 10% of depth beyond 40 m.

k. Having ''signal processing'' sub-systems using ''pulse compression'' and having any of the following:

k.1. A ''pulse compression'' ratio exceeding 150; *or*

k.2. A pulse width of less than 200 ns; *or*

l. Having data processing sub-systems and having any of the following:

l.1. ''Automatic target tracking'' providing, at any antenna rotation, the predicted target position beyond the time of the next antenna beam passage;

Note: 6A008.l.1 does not control conflict alert capability in ATC systems, or marine or harbor radar

l.2. Calculation of target velocity from primary radar having non-periodic (variable) scanning rates;

l.3. Processing for automatic pattern recognition (feature extraction) and comparison with target characteristic data bases (waveforms or imagery) to identify or classify targets; *or*

l.4. Superposition and correlation, or fusion, of target data from two or more ''geographically dispersed'' and ''interconnected radar sensors'' to enhance and discriminate targets.

Note: 6A008.l.4 does not control systems, equipment and assemblies designed for marine traffic control

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■ 48. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 6, ECCN 6A996 is amended by revising the Items paragraph of the List of Items Controlled section, to read as follows:

6A996 ''Magnetometers'' not controlled by ECCN 6A006, ''Superconductive'' electromagnetic sensors, and specially designed components therefor, as follows (see List of Items Controlled).

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List of Items Controlled

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Items:

a. ''Magnetometers'', n.e.s., having a 'sensitivity' lower (better) than 1.0 nT (rms) per square root Hz.

Technical Note: For the purposes of 6A996, 'sensitivity' (noise level) is the root mean square of the device-limited noise floor which is the lowest signal that can be measured.

b. ''Superconductive'' electromagnetic sensors, components manufactured from ''superconductive'' materials:

b.1. Designed for operation at temperatures below the ''critical temperature'' of at least one of their ''superconductive'' constituents (including Josephson effect devices or ''superconductive'' quantum interference devices (SQUIDS));

b.2. Designed for sensing electromagnetic field variations at frequencies of 1 KHz or less; and

b.3. Having any of the following characteristics:

b.3.a. Incorporating thin-film SQUIDS with a minimum feature size of less than 2 μm and with associated input and output coupling circuits;

b.3.b. Designed to operate with a magnetic field slew rate exceeding 1×10^6 magnetic flux quanta per second;

b.3.c. Designed to function without magnetic shielding in the earth's ambient magnetic field; or

b.3.d. Having a temperature coefficient less (smaller) than 0.1 magnetic flux quantum/K.

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■ 49. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 6, ECCN 6D003 is amended by revising the Heading, adding RS to the Reason for Control section, revising the RS paragraph of the License Requirements section, and revising the Items paragraph of the List of Items Controlled section, to read as follows:

6D003 Other ''software'' as follows (see List of Items Controlled)

License Requirements

Reason for Control: NS, RS, AT.

Control(s)	Country chart
* * *	* *
RS applies to paragraph c	RS Column 1.

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List of Items Controlled

* * * * *

Items:

ACOUSTICS

a. ''Software'' as follows:

a.1. ''Software'' specially designed for acoustic beam forming for the ''real time processing'' of acoustic data for passive reception using towed hydrophone arrays;

a.2. ''Source code'' for the ''real time processing'' of acoustic data for passive reception using towed hydrophone arrays;

a.3. ''Software'' specially designed for acoustic beam forming for the ''real time processing'' of acoustic data for passive reception using bottom or bay cable systems;

a.4. ''Source code'' for the ''real time processing'' of acoustic data for passive reception using bottom or bay cable systems;

b. Optical sensors. None.

CAMERAS

c. ''Software'' designed or modified for cameras incorporating ''focal plane arrays'' specified by 6A002.a.3.f and designed or modified to remove a frame rate restriction and allow the camera to exceed the frame rate specified in 6A003.b.4 Note 3.a;

d. Optics. None.

e. Lasers. None

MAGNETIC AND ELECTRIC FIELD SENSORS

f. ''Software'' as follows:

f.1. ''Software'' specially designed for magnetic and electric field ''compensation systems'' for magnetic sensors designed to operate on mobile platforms;

f.2. ''Software'' specially designed for magnetic and electric field anomaly detection on mobile platforms;

GRAVIMETERS

g. ''Software'' specially designed to correct motional influences of gravity meters or gravity gradiometers;

RADAR

h. ''Software'' as follows:

h.1. Air Traffic Control (ATC) ''software'' application ''programs'' hosted on general purpose computers located at Air Traffic Control centers and capable of any of the following:

h.1.a. Processing and displaying more than 150 simultaneous ''system tracks''; or

h.1.b. Accepting radar target data from more than four primary radars;

h.2. ''Software'' for the design or ''production'' of radomes and having all of the following:

h.2.a. Specially designed to protect the ''electronically steerable phased array antennae'' controlled by 6A008.e.; *and*

h.2.b. Resulting in an antenna pattern having an 'average side lobe level' more than 40 dB below the peak of the main beam level.

Technical Note: 'Average side lobe level' in 6D003.h.2.b is measured over the entire array excluding the angular extent of the main beam and the first two side lobes on either side of the main beam.

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■ 50. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 6, ECCN 6E993 is amended by revising the Items paragraph of the List of Items Controlled section, to read as follows:

6E993 Other ''technology'', not controlled by 6E003, as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

a. Optical fabrication technologies for serially producing optical components at a rate exceeding 10 m^2 of surface area per year on any single spindle and having all of the following:

a.1. Area exceeding 1 m^2; *and*

a.2. Surface figure exceeding $\lambda/10$ (rms) at the designed wavelength;

b. ''Technology'' for optical filters with a bandwidth equal to or less than 10 nm, a field of view (FOV) exceeding 40° and a resolution exceeding 0.75 line pairs per milliradian;

c. ''Technology'' for the ''development'' or ''production'' of cameras controlled by 6A993;

d. ''Technology'' ''required'' for the ''development'' or ''production'' of non-triaxial fluxgate ''magnetometers'' or non-triaxial fluxgate ''magnetometer'' systems, having any of the following:

d.1. 'Sensitivity' lower (better) than 0.05 nT (rms) per square root Hz at frequencies of less than 1 Hz; or

d.2. 'Sensitivity' lower (better) than 1×10^{-3} nT (rms) per square root Hz at frequencies of 1 Hz or more.

Technical Note: For the purposes of 6E993, 'sensitivity' (or noise level) is the root mean square of the device-limited noise floor which is the lowest signal that can be measured.

* * * * *

■ 51. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 7, ECCN 7A003 is amended by revising the Heading and the Items paragraph in the

List of Items Controlled section, to read as follows:

7A003 Inertial systems and specially designed components, as follows.

* * * * *

List of Items Controlled

* * * * *

Items:

a. Inertial Navigation Systems (INS) (gimballed or strapdown) and inertial equipment, designed for ''aircraft'', land vehicles, vessels (surface or underwater) or ''spacecraft'', for navigation, attitude, guidance or control and having any of the following and specially designed components therefor:

a.1. Navigation error (free inertial) subsequent to normal alignment of 0.8 nautical mile per hour (nm/hr) ''Circular Error Probable'' (''CEP'') or less (better); *or*

a.2. Specified to function at linear acceleration levels exceeding 10 g;

b. Hybrid Inertial Navigation Systems embedded with Global Navigation Satellite System(s) (GNSS) or with ''Data-Based Referenced Navigation'' (''DBRN'') System(s) for navigation, attitude, guidance or control, subsequent to normal alignment and having an INS navigation position accuracy, after loss of GNSS or ''DBRN'' for a period of up to 4 minutes, of less (better) than 10 meters ''Circular Error Probable'' (''CEP'');

c. Inertial measurement equipment for heading or True North determination and having any of the following, and specially designed components therefor:

c.1. Designed to have heading or True North determination accuracy equal to, or less (better) than 0.07 deg sec (Lat) (equivalent to 6 arc minutes (rms) at 45 degrees latitude); *or*

c.2. Designed to have a non-operating shock level of 900 g or greater at a duration of 1 msec, or greater;

d. Inertial measurement equipment including Inertial Measurement Units (IMU) and Inertial Reference Systems (IRS), incorporating accelerometers or gyros controlled by 7A001 or 7A002, and specially designed components therefor.

Note 1: The parameters of 7A003.a and 7A003.b are applicable with any of the following environmental conditions:

a. Input random vibration with an overall magnitude of 7.7 g (rms) in the first 0.5 hour and a total test duration of 1.5 hour per axis in each of the 3 perpendicular axes, when the random vibration meets all of the following:

1. A constant Power Spectral Density (PSD) value of 0.04 g^2/Hz over a frequency interval of 15 to 1,000 Hz; and

2. The PSD attenuates with frequency from 0.04 g^2/Hz to 0.01 g^2/Hz over a frequency interval from 1,000 to 2,000 Hz;

b. An angular rate capability about one or more axes of equal to or more than +2.62 rad/s (150 deg/s); or

c. According to national standards equivalent to a. or b. of this note.

Note 2: 7A003 does not control inertial navigation systems which are certified for use on ''civil aircraft'' by civil authorities of a Wassenaar Arrangement Participating State, see Supplement No. 1 to Part 743 for a list of these countries.

Note 3: 7A003.c.1 does not control theodolite systems incorporating inertial equipment specially designed for civil surveying purposes.

Technical Note: 7A003.b refers to systems in which an INS and other independent navigation aids are built into a single unit (embedded) in order to achieve improved performance.

* * * * *

■ 52. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 8, ECCN 8A001 is amended by revising the Items paragraph in the List of Items Controlled section, to read as follows:

8A001 Submersible vehicles and surface vessels, as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

* * * * *

Items:

a. Manned, tethered submersible vehicles designed to operate at depths exceeding 1,000 m;

b. Manned, untethered submersible vehicles having any of the following:

b.1. Designed to 'operate autonomously' and having a lifting capacity of all the following:

b.1.a. 10% or more of their weight in air; and

b.1.b. 15 kN or more;

b.2. Designed to operate at depths exceeding 1,000 m; or

b.3. Having all of the following:

b.3.a. Designed to continuously 'operate autonomously' for 10 hours or more; and

b.3.b. 'Range' of 25 nautical miles or more;

Technical Notes: 1. For the purposes of 8A001.b, 'operate autonomously' means fully submerged, without snorkel, all systems working and cruising at minimum speed at which the submersible can safely control its depth dynamically by using its depth planes only, with no need for a support vessel or support base on the surface, sea-bed or shore, and containing a propulsion system for submerged or surface use.

2. For the purposes of 8A001.b, 'range' means half the maximum distance a submersible vehicle can 'operate autonomously'.

c. Unmanned, tethered submersible vehicles designed to operate at depths exceeding 1,000 m and having any of the following:

c.1. Designed for self-propelled maneuver using propulsion motors or thrusters controlled by 8A002.a.2; *or*

c.2. Fiber optic data link;

d. Unmanned, untethered submersible vehicles having any of the following:

d.1. Designed for deciding a course relative to any geographical reference without real-time human assistance;

d.2. Acoustic data or command link; *or*

d.3. Fiber optic data or command link exceeding 1,000 m;

e. Ocean salvage systems with a lifting capacity exceeding 5 MN for salvaging objects from depths exceeding 250 m and having any of the following:

e.1. Dynamic positioning systems capable of position keeping within 20 m of a given point provided by the navigation system; *or*

e.2. Seafloor navigation and navigation integration systems, for depths exceeding 1,000 m and with positioning accuracies to within 10 m of a predetermined point;

f. Surface-effect vehicles (fully skirted variety) having all of the following:

f.1. Maximum design speed, fully loaded, exceeding 30 knots in a significant wave height of 1.25 m (Sea State 3) or more;

f.2. Cushion pressure exceeding 3,830 Pa; *and*

f.3. Light-ship-to-full-load displacement ratio of less than 0.70;

g. Surface-effect vehicles (rigid sidewalls) with a maximum design speed, fully loaded, exceeding 40 knots in a significant wave height of 3.25 m (Sea State 5) or more;

h. Hydrofoil vessels with active systems for automatically controlling foil systems, with a maximum design speed, fully loaded, of 40 knots or more in a significant wave height of 3.25 m (Sea State 5) or more;

i. 'Small waterplane area vessels' having any of the following:

i.1. Full load displacement exceeding 500 tonnes with a maximum design speed, fully loaded, exceeding 35 knots in a significant wave height of 3.25 m (Sea State 5) or more; *or*

i.2. Full load displacement exceeding 1,500 tonnes with a maximum design speed, fully loaded, exceeding 25 knots in a significant wave height of 4 m (Sea State 6) or more.

Technical Note: A 'small waterplane area vessel' is defined by the following formula: Waterplane area at an operational design draft less than $2 \times$ (displaced volume at the operational design draft)$^{2/3}$.

* * * * *

■ 53. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 8, ECCN 8A002 is amended by revising the Heading and the Items paragraph in the List of Items Controlled section, to read as follows:

8A002 Marine systems, equipment and components, as follows (see List of Items Controlled).

* * * * *

List of Items Controlled

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Items:

a. Systems, equipment and components, specially designed or modified for submersible vehicles and designed to operate at depths exceeding 1,000 m, as follows:

a.1. Pressure housings or pressure hulls with a maximum inside chamber diameter exceeding 1.5 m;

a.2. Direct current propulsion motors or thrusters;

a.3. Umbilical cables, and connectors therefor, using optical fiber and having synthetic strength members;

a.4. Components manufactured from material specified by ECCN 8C001;

Technical Note: The objective of 8A002.a.4 should not be defeated by the export of 'syntactic foam' controlled by 8C001 when an intermediate stage of manufacture has been performed and it is not yet in its final component form.

b. Systems specially designed or modified for the automated control of the motion of submersible vehicles controlled by 8A001, using navigation data, having closed loop servo-controls and having any of the following:

b.1. Enabling a vehicle to move within 10 m of a predetermined point in the water column;

b.2. Maintaining the position of the vehicle within 10 m of a predetermined point in the water column; *or*

b.3. Maintaining the position of the vehicle within 10 m while following a cable on or under the seabed;

c. Fiber optic hull penetrators or connectors;

d. Underwater vision systems as follows:

d.1. Television systems and television cameras, as follows:

d.1.a. Television systems (comprising camera, monitoring and signal transmission equipment) having a 'limiting resolution' when measured in air of more than 800 lines and specially designed or modified for remote operation with a submersible vehicle;

d.1.b. Underwater television cameras having a 'limiting resolution' when measured in air of more than 1,100 lines;

d.1.c. Low light level television cameras specially designed or modified for underwater use and having all of the following:

d.1.c.1. Image intensifier tubes controlled by 6A002.a.2.a; and

d.1.c.2. More than 150,000 ''active pixels'' per solid state area array;

Technical Note: 'Limiting resolution' is a measure of horizontal resolution usually expressed in terms of the maximum number of lines per picture height discriminated on a test chart, using IEEE Standard 208/1960 or any equivalent standard.

d.2. Systems specially designed or modified for remote operation with an underwater vehicle, employing techniques to minimize the effects of back scatter and including range-gated illuminators or ''laser'' systems;

e. Photographic still cameras specially designed or modified for underwater use below 150 m, with a film format of 35 mm or larger and having any of the following:

e.1. Annotation of the film with data provided by a source external to the camera;

e.2. Automatic back focal distance correction; or

e.3. Automatic compensation control specially designed to permit an underwater camera housing to be usable at depths exceeding 1,000 m;

f. Electronic imaging systems, specially designed or modified for underwater use, capable of storing digitally more than 50 exposed images;

Note: 8A002.f does not control digital cameras specially designed for consumer purposes, other than those employing electronic image multiplication techniques.

g. Light systems specially designed or modified for underwater use, as follows:

g.1. Stroboscopic light systems capable of a light output energy of more than 300 J per flash and a flash rate of more than 5 flashes per second;

g.2. Argon arc light systems specially designed for use below 1,000 m;

h. ''Robots'' specially designed for underwater use, controlled by using a dedicated computer and having any of the following:

h.1. Systems that control the ''robot'' using information from sensors which measure force or torque applied to an external object, distance to an external object, or tactile sense between the ''robot'' and an external object; *or*

h.2. The ability to exert a force of 250 N or more or a torque of 250 Nm or more and using titanium based alloys or ''composite'' ''fibrous or filamentary materials'' in their structural members;

i. Remotely controlled articulated manipulators specially designed or modified for use with submersible vehicles and having any of the following:

i.1. Systems which control the manipulator using the information from sensors which measure the torque or force applied to an external object, or tactile sense between the manipulator and an external object; *or*

i.2. Controlled by proportional master-slave techniques or by using a dedicated computer and having 5 degrees of 'freedom of movement' or more;

Technical Note: Only functions having proportional control using positional feedback or by using a dedicated computer are counted when determining the number of degrees of 'freedom of movement'.

j. Air independent power systems specially designed for underwater use, as follows:

j.1. Brayton or Rankine cycle engine air independent power systems having any of the following:

j.1.a. Chemical scrubber or absorber systems, specially designed to remove carbon dioxide, carbon monoxide and particulates from recirculated engine exhaust;

j.1.b. Systems specially designed to use a monoatomic gas;

j.1.c. Devices or enclosures, specially designed for underwater noise reduction in frequencies below 10 kHz, or special mounting devices for shock mitigation; or

j.1.d. Systems having all of the following:

j.1.d.1. Specially designed to pressurize the products of reaction or for fuel reformation;

j.1.d.2. Specially designed to store the products of the reaction; and

j.1.d.3. Specially designed to discharge the products of the reaction against a pressure of 100 kPa or more;

j.2. Diesel cycle engine air independent systems having all of the following:

j.2.a. Chemical scrubber or absorber systems, specially designed to remove carbon dioxide, carbon monoxide and particulates from recirculated engine exhaust;

j.2.b. Systems specially designed to use a monoatomic gas;

j.2.c. Devices or enclosures, specially designed for underwater noise reduction in frequencies below 10 kHz, or special mounting devices for shock mitigation; and

j.2.d. Specially designed exhaust systems that do not exhaust continuously the products of combustion;

j.3. Fuel cell air independent power systems with an output exceeding 2 kW and having any of the following:

j.3.a. Devices or enclosures, specially designed for underwater noise reduction in frequencies below 10 kHz, or special mounting devices for shock mitigation; or

j.3.b. Systems having all of the following:

j.3.b.1. Specially designed to pressurize the products of reaction or for fuel reformation;

j.3.b.2. Specailly designed to store the products of the reaction; and

j.3.b.3. Specially designed to discharge the products of the reaction against a pressure of 100 kPa or more;

j.4. Stirling cycle engine air independent power systems having all of the following:

j.4.a. Devices or enclosures, specially designed for underwater noise reduction in frequencies below 10 kHz, or special mounting devices for shock mitigation; and

j.4.b. Specially designed exhaust systems which discharge the products of combustion against a pressure of 100 kPa or more;

k. Skirts, seals and fingers, having any of the following:

k.1. Designed for cushion pressures of 3,830 Pa or more, operating in a significant wave height of 1.25 m (Sea State 3) or more and specially designed for surface effect vehicles (fully skirted variety) controlled by 8A001.f; *or*

k.2. Designed for cushion pressures of 6,224 Pa or more, operating in a significant wave height of 3.25 m (Sea State 5) or more and specially designed for surface effect vehicles (rigid sidewalls) controlled by 8A001.g;

l. Lift fans rated at more than 400 kW and specially designed for surface effect vehicles controlled by 8A001.f or 8A001.g;

m. Fully submerged subcavitating or supercavitating hydrofoils, specially designed for vessels controlled by 8A001.h;

n. Active systems specially designed or modified to control automatically the sea-induced motion of vehicles or vessels, controlled by 8A001.f, 8A001.g, 8A001.h or 8A001.i;

o. Propellers, power transmission systems, power generation systems and noise reduction systems, as follows:

o.1. Water-screw propeller or power transmission systems, specially designed for surface effect vehicles (fully skirted or rigid sidewall variety), hydrofoils or 'small waterplane area vessels' controlled by 8A001.f, 8A001.g, .8A001.h or 8A001.i, as follows:

o.1.a. Supercavitating, super-ventilated, partially-submerged or surface piercing propellers, rated at more than 7.5 MW;

o.1.b. Contrarotating propeller systems rated at more than 15 MW;

o.1.c. Systems employing pre-swirl or post-swirl techniques, for smoothing the flow into a propeller;

o.1.d. Light-weight, high capacity (K factor exceeding 300) reduction gearing;

o.1.e. Power transmission shaft systems incorporating ''composite'' material components and capable of transmitting more than 1 MW;

o.2. Water-screw propeller, power generation systems or transmission systems, designed for use on vessels, as follows:

o.2.a. Controllable-pitch propellers and hub assemblies, rated at more than 30 MW;

o.2.b. Internally liquid-cooled electric propulsion engines with a power output exceeding 2.5 MW;

o.2.c. ''Superconductive'' propulsion engines or permanent magnet electric propulsion engines, with a power output exceeding 0.1 MW;

o.2.d. Power transmission shaft systems incorporating ''composite'' material components and capable of transmitting more than 2 MW;

o.2.e. Ventilated or base-ventilated propeller systems, rated at more than 2.5 MW;

o.3. Noise reduction systems designed for use on vessels of 1,000 tonnes displacement or more, as follows:

o.3.a. Systems that attenuate underwater noise at frequencies below 500 Hz and consist of compound acoustic mounts for the acoustic isolation of diesel engines, diesel generator sets, gas turbines, gas turbine generator sets, propulsion motors or propulsion reduction gears, specially designed for sound or vibration isolation and having an intermediate mass exceeding 30% of the equipment to be mounted;

o.3.b. Active noise reduction or cancellation systems, or magnetic bearings, specially designed for power transmission systems, and incorporating electronic control systems capable of actively reducing equipment vibration by the generation of anti-noise or anti-vibration signals directly to the source;

p. Pumpjet propulsion systems having a power output exceeding 2.5 MW using divergent nozzle and flow conditioning vane techniques to improve propulsive efficiency or reduce propulsion-generated underwater-radiated noise;

q. Self-contained, closed or semi-closed circuit (rebreathing) diving and underwater swimming apparatus.

Note: 8A002.q does not control an individual apparatus for personal use when accompanying its user.

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■ 54. In Supplement No. 1 to Part 774 (the Commerce Control List), Category 9, ECCN 9A012 is amended by revising the Heading and the Items paragraph in the List of Items Controlled section, to read as follows:

9A012 Non-military ''unmanned aerial vehicles,'' (''UAVs''), associated systems, equipment and components, as follows (see List of Items Controlled).

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List of Items Controlled

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Items:

a. ''UAVs'' having any of the following:

a.1. An autonomous flight control and navigation capability (e.g., an autopilot with an Inertial Navigation System); or

a.2. Capability of controlled flight out of the direct visual range involving a human operator (*e.g.,* televisual remote control);

b. Associated systems, equipment and components, as follows:

b.1. Equipment specially designed for remotely controlling the ''UAVs'' controlled by 9A012.a.;

b.2. Systems for navigation, attitude, guidance or control, other than those controlled in Category 7 and specially designed to provide autonomous flight control or navigation capability to ''UAVs'' controlled by 9A012.a.;

b.3. Equipment and components, specially designed to convert a manned ''aircraft'' to a ''UAV'' controlled by 9A012.a;

b.4. Air breathing reciprocating or rotary internal combustion type engines, specially designed or modified to propel ''UAVs'' at altitudes above 50,000 feet (15,240 meters).

Note: 9A012 does not control model aircraft.

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Dated: November 25, 2009.

Matthew S. Borman,

Deputy Assistant Secretary for Export Administration.

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LIST OF PUBLIC LAWS

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H.R. 955/P.L. 111–99

To designate the facility of the United States Postal Service located at 10355 Northeast Valley Road in Rollingbay, Washington, as the ''John 'Bud' Hawk Post Office''. (Nov. 30, 2009; 123 Stat. 3011)

H.R. 1516/P.L. 111–100

To designate the facility of the United States Postal Service located at 37926 Church Street in Dade City, Florida, as the ''Sergeant Marcus Mathes Post Office''. (Nov. 30, 2009; 123 Stat. 3012)

H.R. 1713/P.L. 111–101

To name the South Central Agricultural Research Laboratory of the Department of Agriculture in Lane, Oklahoma, and the facility of the United States Postal Service located at 310 North Perry Street in Bennington, Oklahoma, in honor of former Congressman Wesley ''Wes'' Watkins. (Nov. 30, 2009; 123 Stat. 3013)

H.R. 2004/P.L. 111–102

To designate the facility of the United States Postal Service located at 4282 Beach Street in Akron, Michigan, as the ''Akron Veterans Memorial Post Office''. (Nov. 30, 2009; 123 Stat. 3014)

H.R. 2215/P.L. 111–103

To designate the facility of the United States Postal Service located at 140 Merriman Road in Garden City, Michigan, as the ''John J. Shivnen Post Office Building''. (Nov. 30, 2009; 123 Stat. 3015)

H.R. 2760/P.L. 111–104

To designate the facility of the United States Postal Service located at 1615 North Wilcox Avenue in Los Angeles, California, as the ''Johnny Grant Hollywood Post Office Building''. (Nov. 30, 2009; 123 Stat. 3016)

H.R. 2972/P.L. 111–105

To designate the facility of the United States Postal Service located at 115 West Edward Street in Erath, Louisiana, as the ''Conrad DeRouen, Jr. Post Office''. (Nov. 30, 2009; 123 Stat. 3017)

H.R. 3119/P.L. 111–106

To designate the facility of the United States Postal Service located at 867 Stockton Street in San Francisco, California, as the ''Lim Poon Lee Post Office''. (Nov. 30, 2009; 123 Stat. 3018)

H.R. 3386/P.L. 111–107

To designate the facility of the United States Postal Service located at 1165 2nd Avenue in Des Moines, Iowa, as the ''Iraq and Afghanistan Veterans Memorial Post Office''. (Nov. 30, 2009; 123 Stat. 3019)

H.R. 3547/P.L. 111–108

To designate the facility of the United States Postal Service located at 936 South 250 East in Provo, Utah, as the ''Rex E. Lee Post Office Building''. (Nov. 30, 2009; 123 Stat. 3020)

S. 748/P.L. 111–109

To redesignate the facility of the United States Postal Service located at 2777 Logan Avenue in San Diego, California, as the ''Cesar E. Chavez Post Office''. (Nov. 30, 2009; 123 Stat. 3021)

S. 1211/P.L. 111–110

To designate the facility of the United States Postal Service located at 60 School Street, Orchard Park, New York, as the ''Jack F. Kemp Post Office Building''. (Nov. 30, 2009; 123 Stat. 3022)

S. 1314/P.L. 111–111

To designate the facility of the United States Postal Service located at 630 Northeast Killingsworth Avenue in Portland, Oregon, as the ''Dr. Martin Luther King, Jr. Post Office''. (Nov. 30, 2009; 123 Stat. 3023)

S. 1825/P.L. 111–112

To extend the authority for relocation expenses test programs for Federal employees, and for other purposes. (Nov. 30, 2009; 123 Stat. 3024)

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