

Street, NW (Lower Level), Washington, DC 20555-0001.

Comments and questions can be directed by mail to the OMB reviewer: Troy Hillier, Office of Information and Regulatory Affairs (3150-0136), NEOB-10202, Office of Management and Budget, Washington, DC 20503. Comments can also be submitted by telephone at (202) 395-3084. The NRC Clearance Officer is Brenda Jo. Shelton, (301) 415-7233.

Dated at Rockville, Md., this 21st day of March, 1995.

For the Nuclear Regulatory Commission.

**Gerald F. Cranford,**

*Designated Senior Official for Information Resources Management.*

[FR Doc. 95-7434 Filed 3-24-95; 8:45 am]

BILLING CODE 7590-01-M

**[Docket Nos. 50-254 and 50-265]**

**Commonwealth Edison Co. and Iowa-Illinois Gas and Electric Co., Quad Cities Nuclear Power Station, Units 1 and 2; Environmental Assessment and Finding of No Significant Impact**

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License Nos. DPR-29 and DPR-30, issued to Commonwealth Edison Company (ComEd, the licensee) for operation and Iowa-Illinois Gas and Electric Company (IIGEC) for possession of the Quad Cities Nuclear Power Station, Units 1 and 2, located in Rock Island County, Illinois.

**Environmental Assessment**

*Identification of the Proposed Action*

The proposed action would revise the operating license to reflect the transfer of IIGEC's 25 percent ownership in Quad Cities, Units 1 and 2, through the merger of IIGEC, MidAmerican Energy Company (MidAmerican), Midwest Power Systems Inc. and Midwest Resources Inc., with MidAmerican as the surviving entity from the merger. Quad Cities is operated by ComEd on behalf of IIGEC. Commonwealth Edison Company, alone, is licensed to operate Quad Cities, Units 1 and 2. The proposed action is in accordance with ComEd's application dated February 23, 1995.

*The Need for the Proposed Action*

The proposed action is required to reflect the ownership change discussed above. The amendment reflecting the transfer of IIGEC's interest in the license will have minimal impact on the operation of the facility by ComEd. The transfer and amendment will not affect

the facility's Technical Specifications, license conditions, or the organization and practices of ComEd.

*Environmental Impacts of the Proposed Action*

The Commission has completed its evaluation of the proposed license amendment and concludes that there will be no changes to Quad Cities, Units 1 and 2, or the environment as a result of this action. The transfer of IIGEC's possession-only interest in the license and the associated license amendment will not affect the numbers, qualifications, or organizational affiliation of the personnel who operate the facility, as ComEd will remain the holder of the operating license and continue to be responsible for the operation of Quad Cities, Units 1 and 2.

The Commission has evaluated the environmental impact of the proposed action and has determined that the probability or consequences of accidents would not be increased by the transfer of ownership, and that post-accident radiological releases would not be greater than previously determined. Further, the Commission has determined that the transfer of ownership would not affect routine radiological plant effluents and would not increase occupational radiological exposure. Accordingly, the Commission concludes that there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential non-radiological impacts, the transfer of ownership would not affect nonradiological plant effluents and would have no other environmental impact. Therefore, the Commission concludes that there are no significant nonradiological environmental impacts associated with the proposed action.

*Alternative to the Proposed Action*

Since the Commission has concluded that the environmental effects of the proposed action are not significant, any alternative with equal or greater environmental impact need not be evaluated. The principal alternative would be to deny the requested approval. Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are identical.

*Alternative Use of Resources*

This action does not involve the use of resources not previously considered in the Final Environmental Statement related to operation of Quad Cities

Nuclear Power Station, Units 1 and 2, dated September 1972.

*Agencies and Persons Consulted*

The NRC staff reviewed the licensee's request and consulted with the Illinois State official regarding the environmental impact of the proposed action. The State official had no comments.

**Finding of No Significant Impact**

Based upon the foregoing environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed license amendment.

For further details with respect to this action, see the licensee's submittal dated February 23, 1995, which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW, Washington, DC, and at the local public document room located at the Dixon Public Library, 221 Hennepin Avenue, Dixon, Illinois.

Dated at Rockville, Md., this 21st day of March 1995.

For the Nuclear Regulatory Commission.

**Robert A. Capra,**

*Director, Project Directorate III-2, Division of Reactor Projects—III/IV, Office of Nuclear Reactor Regulation.*

[FR Doc. 95-7435 Filed 3-24-95; 8:45 am]

BILLING CODE 7590-01-M

**Proposed Generic Letter; Pressure Locking and Thermal Binding of Safety-Related Power-Operated Gate Valves**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Notice of issuance.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is proposing to issue a generic letter regarding pressure locking and thermal binding of safety-related power-operated gate valves. This proposed generic letter is intended to ensure that addressees have performed or will perform evaluations, and as appropriate, analyses and/or corrective actions to ensure that safety-related power-operated gate valves that may be susceptible to pressure locking or thermal binding are capable of performing their required safety functions. The NRC is seeking comment from interested parties regarding both the technical and regulatory aspects of

the proposed generic letter presented under the Supplementary Information heading. This generic letter and supporting documentation were discussed in meeting number 268 of the Committee to Review Generic Requirements (CRGR) on January 24, 1995. The staff incorporated the changes requested by CRGR plus information concerning two recent events and obtained CRGR endorsement. The relevant information that was sent to the CRGR to support their review of the proposed generic letter will be placed in the Public Document Room. The NRC will consider comments received from interested parties in the final evaluation of the proposed generic letter. The NRC's final evaluation will include a review of the technical position and, when appropriate, an analysis of the value/impact on licensees. Should this generic letter be issued by the NRC, it will become available for public inspection in the Public Document Room.

**DATES:** Comment period expires April 26, 1995. Comments submitted after this date will be considered if it is practical to do so, but assurance of consideration cannot be given except for comments received on or before this date.

**ADDRESSES:** Submit written comments to Chief, Rules Review and Directives Branch, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Written comments may also be delivered to 11545 Rockville Pike, Rockville, Maryland, from 7:30 am to 4:15 pm, Federal workdays. Copies of written comments received may be examined at the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Thomas G. Scarbrough, (301) 415-2794.

**SUPPLEMENTARY INFORMATION:** NRC Generic Letter 95-XX: Pressure Locking and Thermal Binding of Safety-Related Power-Operated Gate Valves.

#### *Addresses*

All holders of operating licenses or construction permits for nuclear power reactors.

#### *Purpose*

The U.S. Nuclear Regulatory Commission (NRC) is issuing this generic letter to request that addressees perform, or confirm that they already have performed, (1) evaluations of operational configurations of safety-related power-operated (including motor, air, and hydraulic-operated) gate valves for susceptibility to pressure locking and thermal binding, and (2) further analyses, and any needed

corrective actions, to ensure that safety-related power-operated gate valves that are susceptible to pressure locking or thermal binding are capable of performing their required safety functions.

NRC previously provided guidance on an acceptable approach for addressing pressure locking and thermal binding of MOVs in Supplement 6 to Generic Letter (GL) 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance," but did not request specific actions by licensees to address these problems at that time. This letter confirms (as was indicated earlier in Supplement 6) that licensees are expected under existing regulations to take actions to ensure that safety-related power-operated gate valves susceptible to pressure locking or thermal binding are capable of performing their required safety functions. The guidance in Attachment 1 to this letter is derived directly from (and is intended to be the same as) the guidance provided in Enclosure 1 to GL 89-10, Supplement 6; except, in this generic letter, (1) the guidance is being issued as an approved generic NRC staff position for implementation by licensees who have not already satisfactorily addressed pressure locking and thermal binding of MOVs by implementing the guidance in Supplement 6 (or equivalent industry methods); and (2) the guidance is also intended for adaptation and implementation by all licensees, to address the pressure-locking and thermal-binding phenomena in other types of power-operated (i.e., air and hydraulic-operated) gate valves, as well as MOVs. Finally, for both MOVs and other power-operated valves, this letter requires that licensees submit for staff review summary information regarding any actions taken to ensure that valves susceptible to pressure locking or thermal binding are capable of performing their required safety functions, including (a) actions taken by licensees on their own volition to implement the guidance provided in Supplement 6 (or equivalent industry methods), as well as (b) actions taken in response to this letter. (No response was required from licensees in Supplement 6 to GL 89-10 regarding pressure locking and thermal binding.)

In this generic letter, the NRC staff is requesting a preliminary evaluation of pressure locking and thermal binding of safety-related power-operated gate valves, and, subsequently, a more detailed evaluation and resolution of the issue.

#### *Background*

The NRC staff and the nuclear industry have been aware of disc binding problems of gate valves for many years. The industry has issued several event reports describing failure of safety-related gate valves to operate due to pressure locking or thermal binding of the valve discs. Several generic industry communications have given guidance for both identifying susceptible valves and performing appropriate preventive and corrective measures. Despite industry awareness of the problem, pressure locking and thermal binding events continue to occur. In addition to events at U.S. nuclear power plants, French experience with pressure locking events was recently documented in NUREG/CP-0137 (July 1994), "Proceedings of the Third NRC/ASME Symposium on Valve and Pump Testing."

In GL 89-10 (June 28, 1989), the staff asked holders of operating licenses and construction permits to provide additional assurance of the capability of safety-related MOVs and certain other MOVs in safety-related systems to perform their safety-related functions by reviewing MOV design bases, verifying MOV switch settings initially and periodically, testing MOVs under design-basis conditions where practicable, improving evaluations of MOV failures and necessary corrective action, and trending MOV problems. In Enclosure 1 to Supplement 6 to GL 89-10 (March 8, 1994), the NRC staff described one acceptable approach for licensees to address pressure locking and thermal binding of motor-operated gate valves.

In March 1993, the NRC issued NUREG-1275, Volume 9, "Pressure Locking and Thermal Binding of Gate Valves." This NUREG gives the history of pressure locking and thermal binding events, describes the phenomena, discusses the consequences of locking or binding on valve functionality, summarizes preventive measures, and assesses the safety significance of the phenomena. Pressure locking or thermal binding can cause a power-operated valve to fail to open, resulting in an inability of the associated safety train or system to perform its safety function. Pressure locking and thermal binding represent potential common-cause failure modes that can render redundant trains of certain safety-related systems or multiple safety systems incapable of performing their safety function. Such failures may not be self-revealing through existing surveillance tests or normal operating cycles.

### *Description of Circumstances*

After issuing Volume 9 of NUREG-1275, the NRC staff discussed pressure locking and thermal binding with several licensees (1) to gather information on the technical issues related to generic and plant-specific valve and system characteristics, and (2) to determine the implementation status of prior industry guidance for identification of susceptible valves and application of preventive and corrective measures. NRC surveys indicated that some licensees have performed multiple reviews of pressure locking and thermal binding. However, the staff found only limited instances of valves being modified to alleviate the effects of pressure locking and thermal binding.

In Enclosure 1 to Supplement 6 of GL 89-10, the NRC staff reminded licensees that they are expected under existing regulations to take actions to ensure that safety-related power-operated gate valves susceptible to pressure locking or thermal binding are capable of performing their required safety functions, and described an acceptable approach for licensees and permit holders to address pressure locking and thermal binding of motor-operated gate valves as part of their GL 89-10 programs. The information on pressure locking and thermal binding of motor-operated gate valves provided in Enclosure 1 to Supplement 6 of GL 89-10 was intended as timely notification of operating experience feedback. During inspections of GL 89-10 programs, the staff found the actions taken by licensees to address pressure locking and thermal binding of motor-operated gate valves to be varied. Although many licensees had conducted some level of review of the potential for pressure locking and thermal binding of their motor-operated gate valves, few licensees had either (1) thoroughly evaluated the capability of the motor actuators to overcome the phenomena, or (2) taken corrective action to prevent the phenomena as discussed in Supplement 6. In view of these inspection results, the NRC staff has determined that further action (i.e., this generic letter) is now warranted to ensure that safety-related power-operated gate valves susceptible to pressure locking or thermal binding are capable of performing their required safety functions.

Most licensees are nearing completion of their GL 89-10 programs. In meetings with industry representatives and licensees, the staff stated that, during its closure review, it will assess the progress being made by licensees in addressing pressure locking and thermal

binding of motor-operated gate valves. The staff also stated that licensees need not complete their response to the pressure locking and thermal binding issue at the time that the verification of the design-basis capability of MOVs within the scope of GL 89-10 is completed because the staff would evaluate the acceptability of addressee resolution to pressure locking and thermal binding of all safety-related power-operated gate valves, including MOVs, in a consolidated effort (via this generic letter). Finally, the staff stated that this generic letter would address the schedule for completing the licensees' response to the pressure locking and thermal binding issue.

The NRC staff held a public workshop on February 4, 1994, to discuss pressure locking and thermal binding of gate valves, including prioritization of susceptible valves for corrective action. A summary of the public workshop is available in the NRC Public Document Room and contains information on evaluation of pressure locking and thermal binding, and actions taken in response to the identification of susceptible valves.

On February 28, 1995, NRC issued Information Notice (IN) 95-14, "Susceptibility of Containment Sump Recirculation Gate Valves to Pressure Locking." This information notice alerted licensees to a report from Northeast Nuclear Energy Company, the licensee for Millstone Nuclear Power Station, Unit 2, that both containment sump recirculation motor-operated gate valves might experience pressure locking during a design-basis loss-of-coolant accident and fail in the closed position. On March 15, 1995, NRC issued IN 95-18, "Potential Pressure-Locking of Safety-Related Power-Operated Gate Valves." This information notice alerted licensees to a report from Connecticut Yankee Atomic Power Company, the licensee for Haddam Neck Nuclear Power Plant, that seven motor-operated gate valves in the safety injection systems were susceptible to pressure-locking to the extent that the operability of the valves may have been jeopardized.

### *Discussion*

The pressure locking and thermal binding phenomena are based on well-known concepts. The identification of susceptible valves and the determination of when the phenomena might occur requires a thorough knowledge of components, systems, and plant operations. Pressure locking occurs in flexible-wedge and double-disc gate valves when fluid becomes pressurized within the valve bonnet and

the actuator is not capable of overcoming the additional thrust requirements resulting from the differential pressure created across both valve discs by the pressurized fluid in the valve bonnet. For example, the fluid may enter the valve bonnet (1) during normal open and close valve cycling, (2) when a fluid differential pressure across a disc causes the disc to move slightly away from the seat, creating a path to either increase the fluid pressure or fill the bonnet with fluid, or (3) for a steamline valve, when differential pressure exists across the disc and the valve orientation permits condensate to collect and enter the bonnet. Surveillance testing can cause a valve to experience pressure locking or thermal binding. For example, an inboard isolation MOV in the reactor core isolation cooling (RCIC) system steamline at a boiling-water reactor (BWR) plant failed in the closed position following routine surveillance testing. Pressure locking and thermal binding may occur in varying degrees but may not, in all cases, render a valve incapable of operating, though a delay in valve stroke time or valve damage may occur.

Various plant operating conditions can introduce pressure locking. Valve bonnet pressure might be higher than anticipated, causing pressure locking under certain conditions. For example, when (1) the gate valve is in a line connected to a high-pressure system and isolated only by check valves (which may transmit pressure even when passing leak-tightness criteria) and (2) bonnet volume temperature increases, pressurization results from thermal expansion of the confined fluid. Valve bonnet temperature might increase in response to heatup during plant operation, ambient air temperature rise due to leaking components or pipe breaks, or thermal conduction or convection through connected piping. Over time, bonnet pressure could decay by leakage past the seating surfaces or stem packing. However, the depressurization time may be longer than the system response time to initiate valve actuation to perform its safety function. Also, valve actuator operation at locked rotor conditions for a few seconds could degrade the motor torque capability of a motor-operated gate valve.

Thermal binding is generally associated with a wedge gate valve that is closed while the system is hot and then allowed to cool before attempting to open the valve. Mechanical interference occurs because of different expansion and contraction characteristics of the valve body and

disc materials. Thus, reopening the valve might be prevented until the valve and disc are reheated. Solid-wedge gate valves are most susceptible to thermal binding. However, flexible-wedge gate valves with a high temperature gradient across the discs may experience thermal binding.

Pressure locking or thermal binding occurs as a result of the valve design characteristics (wedge and valve body configuration, flexibility, and material thermal coefficients) when the valve is subjected to specific pressures and temperatures during various modes of plant operation. Operating experience indicates these situations were not always considered as part of the design basis for valves in many plants.

#### *Requested Actions*

Within 60 days of the date of this generic letter, each addressee of this generic letter is requested to perform and complete the following actions:

1. Evaluate (in at least a preliminary manner) the operational configurations of all safety-related power-operated (i.e., motor-operated, air-operated, and hydraulic-operated) gate valves to identify those valves that are potentially susceptible to pressure locking or thermal binding; and

2. Document a basis for the operability of the potentially susceptible valves or, where operability cannot be supported, take action in accordance with the Technical Specifications.

Within 180 days of the date of this generic letter, each addressee of this generic letter is requested to implement and complete the guidance provided in Attachment 1 to perform the following actions:

1. Evaluate the operational configurations of safety-related power-operated (i.e., motor-operated, air-operated, and hydraulic-operated) gate valves in its plant to identify valves that are susceptible to pressure locking and thermal binding;

2. Perform further analyses as appropriate, and take needed corrective actions (or justify longer schedules), to ensure that the susceptible valves identified in 1 are capable of performing their intended safety function(s) under all modes of plant operation, including test configuration.

**Note:** If a licensee has already performed an evaluation of operational configurations to identify motor-operated gate valves susceptible to pressure locking and thermal binding, and has performed additional analyses and taken needed corrective actions for identified valves, in a manner that satisfactorily implements the guidance in Supplement 6 to GL 89-10 (or equivalent industry methods) so that the identified

valves are capable of performing their required safety functions, the licensee need not perform any additional action under 1 and 2 above for MOVs.

#### *50.54(f) Information Request*

##### 1. Requested Information

All addressees, including those who have already satisfactorily addressed pressure locking and thermal binding for MOVs by implementing the guidance in Supplement 6 to GL 89-10 (or equivalent industry methods), are requested to provide a summary description of the following:

a. The susceptibility evaluation of operational configurations performed in response to (or consistent with) 180-day Requested Action 1, and the further analyses performed in response to (or consistent with) 180-day Requested Action 2, including the bases or criteria for determining that valves are/are not susceptible to pressure locking or thermal binding;

b. The results of the susceptibility evaluation and the further analyses referred to in (a) above, including a listing of the susceptible valves identified;

c. The corrective actions, or other dispositioning, for the valves identified as susceptible to pressure locking or thermal binding, including: (i) Equipment or procedure modifications completed and planned (including the completion schedule for such actions); and (ii) justification for any determination that particular safety-related power-operated gate valves susceptible to pressure locking or thermal binding are acceptable as is.

The staff believes that a corrective action schedule (if corrective actions are needed) may be based on risk significance, including consideration of common cause failure of multiple valves. However, the time schedules for completing corrective action in response to pressure locking or thermal binding concerns do not supersede the requirements of the NRC regulations and individual plant Technical Specifications in the event that a safety-related valve is determined to be incapable of performing its safety function. An addressee's schedule for completing corrective action in response to this generic letter will be considered independent from GL 89-10.

##### 2. Required Response

All addressees are required to submit the following written response to this generic letter:

a. Within 30 days from the date of this generic letter, a written response indicating whether or not the addressee will implement the action(s) requested

above. If the addressee intends to implement the requested action(s), provide a schedule for completing implementation. If an addressee chooses not to take the requested action(s), provide a description of any proposed alternative course of action, the schedule for completing the alternative course of action (if applicable), and the safety basis for determining the acceptability of the planned alternative course of action;

b. Within 180 days from the date of this generic letter, a written response to the information request specified above in Requested Information Items 1.a, 1.b, and 1.c;

All addressees shall submit the required written responses and report specified in item 2 above to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, under oath or affirmation under the provisions of section 182a, Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f). In addition, a copy shall be submitted to the appropriate Regional Administrator.

#### *Backfit Discussion*

10 CFR part 50, appendix A, Criteria 1 and 4, and plant licensing safety analyses, require and/or commit that the addressees design and test safety-related components and systems to provide adequate assurance that those systems can perform their safety functions. Other individual criteria in appendix A to 10 CFR part 50 apply to specific systems. In accordance with those regulations and licensing commitments, and under the additional provisions of 10 CFR part 50, appendix B, Criterion XVI, licensees are expected to take actions to ensure that safety-related power-operated gate valves susceptible to pressure locking or thermal binding are capable of performing their required safety functions. Supplement 6 to GL 89-10 alerted licensees to the problems with pressure locking and thermal binding in MOVs, and described an acceptable approach for addressing these phenomena for MOVs but did not request any specific actions or response form licensees.

The actions requested in this generic letter are considered compliance backfits, under the provisions of 10 CFR 50.109 and existing NRC procedures, to ensure that safety-related power-operated gate valves that are susceptible to pressure locking and thermal binding are capable of performing their intended safety functions. In accordance with the provisions of § 50.109 regarding compliance backfits, a full backfit analysis was not performed for this proposed action; but a documented

evaluation was performed, including a statement of the objectives of and reasons for the requested actions and the basis for invoking the compliance exception. A copy of this evaluation will be made available in the public document room.

#### **Attachment 1—Guidance for Addressing Pressure Locking and Thermal Binding of Power-Operated Gate Valves**

The following summarizes an acceptable approach to addressing pressure locking and thermal binding of gate valves within the scope of this generic letter:

1. Perform an evaluation of the safety-related power-operated gate valves having operational configurations that may be susceptible to pressure locking or thermal binding. Document the basis for determining whether valves (a) are susceptible to pressure locking or thermal binding or (b) can be removed from further consideration. For example, solid wedge disk gate valves might not be susceptible to pressure locking. Double disk gate valves are not likely to be susceptible to thermal binding.

The evaluation should include consideration of the potential for gate valves to undergo pressure locking or thermal binding during surveillance testing.

The evaluation also should include review of generic studies for site-specific applicability, such as in the areas of thermal effects and design-basis depressurization.

Examples of unacceptable reasons for eliminating valves from consideration of pressure locking or thermal binding are (1) leakage rate, (2) engineering judgement without justification, and (3) lack of event occurrence at the specific plant.

Several plants have experienced either pressure locking or thermal binding. These cases are discussed in NUREG-1275, Volume 9. Examples of gate valves involved in pressure locking events are:

- \* Low-pressure coolant injection (LPCI) and low-pressure core spray (LPCS) system injection valves;
- \* Residual heat removal (RHR) system hot-leg crossover isolation valves;
- \* RHR containment sump and suppression pool suction valves;
- \* High-pressure coolant injection (HPCI) steam admission valves;
- \* RHR heat exchange outlet valves;
- \* Emergency feedwater isolation valves; and
- \* RCIC steamline isolation valve.

Examples of gate valves involved in thermal binding events are:

- \* Reactor depressurization system isolation valves;
- \* RHR inboard suction isolation valves;
- \* HPCI steam admission valves;
- \* Power-operated relief valve (PORV) block valves;
- \* Reactor coolant system letdown isolation valves;
- \* RHR suppression pool suction valves;
- \* Containment isolation valves (sample line, letdown exchanger inlet header);
- \* Condensate discharge valves; and
- \* Reactor feedwater pump discharge valves.

2. Perform a further analysis of the safety-related power-operated gate valves identified (in 1 above) as susceptible to either pressure locking or thermal binding to ensure all such valves can be opened to perform their safety function under all modes of plant operation, including test configuration.

If a safety-related power-operated gate valve is found to be susceptible to pressure locking or thermal binding and the addressee relies on the capability of the actuator to overcome pressure locking or thermal binding, consideration of the uncertainties surrounding the prediction of the required thrust to overcome these phenomena should be included in the evaluation. Credit for bonnet pressure decay within the valve response time may not be acceptable unless operation of the actuator under those conditions will not degrade actuator capability.

Attachment 2 to this generic letter describes potential resolution options that may be used by licensees for power-operated gate valves found susceptible to pressure locking to thermal binding. Several preventive and corrective measures for pressure locking and thermal binding are also discussed in NUREG-1275, Volume 9, though each method has limitations with respect to applicability, safety, effectiveness, and cost.

The NRC regulations require an analysis under 10 CFR 50.59 for any valve modifications and the establishment of adequate post-modification and inservice testing of any valves installed as part of the modification. For example, addressees may need to evaluate the effects of drilling the hole in the disk if this option is used to resolve a pressure locking concern. One consideration is the fact that, with a hole in one disk and the other disk flexible allowing fluid to enter the valve bonnet, the valve will be

leaktight with respect to pipe flow in only one direction.

As required through appendix B to 10 CFR part 50, the addressee may need to establish training for plant personnel to perform any necessary actions and incorporate specific procedural precautions/revisions into the existing plant operating procedures. For example, plant personnel might periodically stroke certain valves to reduce the potential for thermal binding.

#### **Attachment 2—Description of Potential Resolution Options for Gate Valves Found Susceptible to Pressure Locking or Thermal Binding**

##### *1. Analysis Only To Justify Adequate Capability to Overcome the Thrust Requirements of Pressure Locking or Thermal Binding*

The staff considers the prediction of the thrust required to overcome pressure locking or thermal binding to be very difficult. An addressee may be able to justify adequate actuator capability in response to pressure locking for small valves. The staff does not consider this alternative appropriate to resolve concerns regarding thermal binding.

##### *2. Testing Only To Justify Adequate Capability to Overcome the Thrust Requirements of Pressure Locking or Thermal Binding*

An addressee may be able to demonstrate through an in-situ or prototype test that the actuator has adequate capability to overcome pressure locking for a particular valve. The staff considers this alternative difficult to justify for thermal binding concerns because of the uncertainty in modeling actual plant and valve conditions.

##### *3. A Combination of Testing and Analysis To Justify Adequate Capability to Overcome the Thrust Requirements of Pressure Locking or Thermal Binding*

An addressee may be able to demonstrate adequate capability of the actuator to overcome pressure locking based on test information from the particular valve or similar valves from other sources together with an analysis to demonstrate applicability. As with Alternative 2, the staff considers this alternative difficult to justify for thermal binding concerns.

##### *4. Equipment Modifications To Prevent Pressure Locking or Thermal Binding*

The staff considers this to be the least difficult alternative to justify and address pressure locking of susceptible gate valves.

Examples of possible modifications to prevent pressure locking are provided in NUREG-1275, Volume 9. Modifications to prevent thermal binding are also possible, such as replacing a wedge gate valve with a parallel-disc gate valve.

#### 5. Procedure Modifications To Prevent Pressure Locking or Thermal Binding

The staff considers procedure modification to be a strong alternative for preventing thermal binding of gate valves. However, procedure modifications are less likely to be a justifiable alternative to prevent pressure locking of gate valves.

Dated at Rockville, MD, this 20th day of March, 1995.

For the Nuclear Regulatory Commission.

**Brian K. Grimes,**

*Director, Division of Project Support, Office of Nuclear Reactor Regulation.*

[FR Doc. 95-7431 Filed 3-24-95; 8:45 am]

BILLING CODE 7590-01-M

[Docket No. 50-423]

#### Northeast Nuclear Energy Co.; Issuance of Amendment to Facility Operating License

The U.S. Nuclear Regulatory Commission (Commission) has issued Amendment No. 106 to Facility Operating License No. NPF-49 issued to Northeast Nuclear Energy Company (the licensee), which revised the Technical Specifications (TS) for operation of the Millstone Nuclear Power Station, Unit No. 3 located in New London County, Connecticut. The amendment is effective as of the date of issuance.

The amendment relaxes the setpoint tolerance for the pressurizer safety valves and the main steam safety valves from  $\pm 1\%$  to  $\pm 3\%$ .

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Ch. I, which are set forth in the license amendment.

Notice of Consideration of Issuance of Amendment and Opportunity for Hearing in connection with this action was published in the **Federal Register** on October 12, 1994 (59 FR 51612). No request for a hearing or petition for leave to intervene was filed following this notice.

The Commission has prepared an Environmental Assessment related to the action and has determined not to prepare an environmental impact

statement. Based upon the environmental assessment, the Commission has concluded that the issuance of the amendment will not have a significant effect on the quality of the human environment (60 FR 13476).

For further details with respect to the action see (1) the application for amendment dated August 4, 1994, (2) Amendment No. 106 to License No. NPF-49, (3) the Commission's related Safety Evaluation, and (4) the Commission's Environmental Assessment. All of these items are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street NW., Washington, DC, and at the local public document room located at the Learning Resource Center, Three Rivers Community-Technical College, Thames Valley Campus, 574 New London Turnpike, Norwich, CT 06360.

Dated at Rockville, Md., this 17th day of March 1995.

For the Nuclear Regulatory Commission.

**Vernon L. Rooney, SR.,**

*Project Manager, Project Directorate I-4, Division of Reactor Projects-I/II, Office of Nuclear Reactor Regulation.*

[FR Doc. 95-7432 Filed 3-24-95; 8:45 am]

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## SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-35518; File No. SR-AMEX-94-30]

### Self-Regulatory Organizations; American Stock Exchange, Inc.; Order Approving Proposed Rule Change Relating to the Listing and Trading of Commodity Linked Notes

March 21, 1995.

#### I. Introduction

On August 22, 1994, the American Stock Exchange, Inc. ("Amex" or "Exchange") submitted to the Securities and Exchange Commission ("SEC" or "Commission"), pursuant to Section 19(b) of the Securities Exchange Act of 1934 ("Act"),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> a proposed rule change to list and trade Commodity Linked Notes ("COINs"), intermediate term notes whose value will be linked in part to changes in the levels of either the J.P. Morgan Commodity Excess Return Index ("JPMCIX") or the J.P. Morgan

Commodity Return Index ("JPMCI" together with JPMCIX, "Indexes").

Notice of the proposed rule change and Amendment No. 1 (defined herein) was published for comment and appeared in the **Federal Register** on December 2, 1994.<sup>3</sup> No comments were received on the proposal. This order approves the proposal, as amended.

#### II. Description of Proposal

The Amex proposes to list for trading under Section 107 of the Amex Company Guide ("Section 107") a new hybrid product called COINs. COINs are intermediate term notes whose value will be linked in part to changes in the level of a commodity index consisting of base metals, precious metals and energy related commodities. More specifically, the value of COINs are based on an index that replicates a trading strategy whereby an investor holds a futures position in each of eleven exchange-traded commodities for a one-month period and then rebalances the positions of the commodities held for the following month to maintain a constant dollar weighting scheme.

##### A. Description of the Indexes

COINs will be linked to either the JPMCI or the JPMCIX, both of which measure the return from an investment in the same eleven industrial futures contracts.<sup>4</sup> According to the Exchange, the JPMCI and JPMCIX are identical in all aspects except for the incorporation of "collateral return," as more fully described below, into the JPMCI.<sup>5</sup> Both Indexes are designed to replicate a trading strategy, described more fully below, that holds a futures position in each of the eleven futures for a one month period and then rebalances the volume of commodities held for the following month based upon a constant

<sup>3</sup> See Securities Exchange Act Release No. 35005 (November 23, 1994), 59 FR 61911. The Amex on November 16, 1994, submitted Amendment No. 1 ("Amendment No. 1") to the proposal to allow the underwriter to link the value of the notes to either the JPMCI or JPMCIX, depending upon market conditions and investor interest at the time of the offering. Additionally, the Amendment provides that: only options approved accounts will be permitted to trade the notes; the notes will provide for a 75% guaranteed return of principal; the index value will be calculated at least once a day; the Amex has executed the necessary surveillance sharing agreements with the relevant commodities exchanges; and COINs will comply with the CFTC's hybrid instrument exemption (58 FR 5580 (Jan. 22, 1993)). See Letter from Benjamin Krause, Amex, to Michael Walinskas, Derivative Products Regulation, SEC, dated November 16, 1994.

<sup>4</sup> The commodities underlying the Indexes and their approximate weighting are: aluminum (9%), copper (8%), nickel (2%), zinc (3%), heating oil (10%), natural gas (7%), unleaded gas (5%), WTI Light Sweet Crude (33%), gold (15%), silver (5%) and platinum (3%).

<sup>5</sup> See Amendment No. 1, *supra* note 3.

<sup>1</sup> 15 U.S.C. 78s(b)(1) (1988).

<sup>2</sup> 17 CFR § 240.19b-4 (1993).