62–296.417 Volume Reduction, Mercury Recovery and Mercury Reclamation (Effective 3/2/99)
62–296.418 Bulk Gasoline Plants (Effective 5/9/07)
62–296.470 Implementation of Federal Clean Air Interstate Rule (Effective 4/1/07)
62–296.480 Implementation of Federal Clean Air Mercury Rule (Effective 9/6/06)
62–296.500 Reasonably Available Control Technology (RACT)—Volatile Organic Compounds (VOC) and Nitrogen Oxides (NO_X) Emitting Facilities (Effective 1/1/96)
62–296.501 Can Coating (Effective 1/1/96)
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62–296.503 Paper Coating (Effective 1/1/96)
62–296.504 Fabric and Vinyl Coating (Effective 1/1/96)
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62–296.507 Magnet Wire Coating (Effective 1/1/96)
62–296.508 Petroleum Liquid Storage (Effective 1/1/96)
62–296.510 Bulk Gasoline Terminals (Effective 1/1/96)
62–296.511 Solvent Metal Cleaning (Effective 10/7/96)
62–296.512 Cutback Asphalt (Effective 1/1/96)
62–296.513 Surface Coating of Miscellaneous Metal Parts and Products (Effective 1/1/96)
62–296.514 Surface Coating of Flat Wood Paneling (Effective 1/1/96)
62–296.515 Graphic Arts Systems (Effective 1/1/96)
62–296.516 Petroleum Liquid Storage Tanks with External Floating Roofs (Effective 1/1/96)
62–296.570 Reasonably Available Control Technology (RACT)—Requirements for Major VOC and NO_X-Emitting Facilities (Effective 3/2/99)
62–296.600 Reasonably Available Control Technology (RACT) Lead (Effective 3/13/96)
62–296.601 Lead Processing Operations in General (Effective 1/1/96)
62–296.602 Primary Lead-Acid Battery Manufacturing Operations (Effective 3/13/96)
62–296.603 Secondary Lead Smelting Operations (Effective 1/1/96)
62–296.604 Electric Arc Furnace Equipped Secondary Steel Manufacturing Operations. (Effective 1/1/96)
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62–296.700 Reasonably Available Control Technology (RACT) Particulate Matter (Effective 1/1/96)
62–296.701 Portland Cement Plants (Effective 1/1/96)
62–296.702 Fossil Fuel Steam Generators (Effective 1/1/96)
62–296.703 Carbonaceous Fuel Burners (Effective 1/1/96)
62–296.704 Asphalt Concrete Plants (Effective 1/1/96)
62–296.705 Phosphate Processing Operations (Effective 1/1/96)
62–296.706 Glass Manufacturing Process (Effective 1/1/96)
62–296.707 Electric Arc Furnaces (Effective 1/1/96)
62–296.708 Sweat or Pot Furnaces (Effective 1/1/96)
62–296.709 Lime Kilns (Effective 1/1/96)
62–296.710 Smelt Dissolving Tanks (Effective 1/1/96)
62–296.711 Materials Handling, Sizing, Screening, Crushing and Grinding Operations (Effective 1/1/96)
62–296.712 Miscellaneous Manufacturing Process Operations (Effective 1/1/96)

CHAPTER 62–297 STATIONARY SOURCE EMISSIONS MONITORING

62–297.100 Purpose and Scope (Effective 3/13/96)
62–297.310 General Compliance Test Requirements (Effective 3/2/99)
62–297.320 Standards for Persons Engaged in Visible Emissions Observations (Effective 2/12/04)
62–297.401 Compliance Test Methods (Effective 3/2/99)
62–297.440 Supplementary Test Procedures (Effective 10/22/02)
62–297.450 EPA VOC Capture Efficiency Test Procedures (Effective 3/2/99)
62–297.520 EPA Continuous Monitor Performance Specifications (Effective 3/2/99)
62–297.620 Exceptions and Approval of Alternate Procedures and Requirements (Effective 11/23/94)

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[FR Doc. E8–30126 Filed 12–19–08; 8:45 am]
BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 60, 63, and 65

[EPA–HQ–OAR–2003–0199; FRL–8754–5]

RIN 2060–AL98

Alternative Work Practice To Detect Leaks From Equipment

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Numerous EPA air emissions standards require specific work practices for equipment leak detection and repair. On April 6, 2006, we proposed a voluntary alternative work practice for leak detection and repair using a newly developed technology, optical gas imaging. The alternative work practice is an alternative to the current leak detection and repair work practice, which is not being revised. The proposed alternative has been amended in this final rule to add a requirement to perform monitoring once per year using the current Method 21 leak detection instrument. This action revises the General Provisions to incorporate the final alternative work practice.

DATES: This final action is effective on December 22, 2008.

ADDRESSES: *Docket:* EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2003–0199. All documents in the docket are listed on the *http://www.regulations.gov* Web site. 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 Center (EPA/DC), EPA West Building, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is located in the EPA Headquarters Library, Room Number 3334, and 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 EPA Docket Center is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: Mr. David Markwordt, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Coatings and Chemicals Group (E143–01), U.S. EPA, Research Triangle Park, North Carolina 27711, telephone (919) 541–0837, facsimile (919) 541–0246, e-mail *markwordt.david@epa.gov.*

SUPPLEMENTARY INFORMATION:

Regulated Entities. The regulated categories and entities affected by this final rule amendment include, but are not limited to the following North American Industry Classification System (NAICS) code categories:

Category	NAICS Code	Examples of potentially regulated entities
Industry	325 324	Chemical manufacturers. Petroleum refineries and manufacturers of coal products.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by the national emission standards. To determine whether your facility is affected by the national emission standards, you should examine the applicability criteria in 40 CFR parts 60, 61, 63, and 65, including, but not limited to: Part 60, subparts A, Kb, VV, XX, DDD, GGG, KKK, QQQ, and WWW; part 61, subparts A, F, L, V, BB, and FF; part 63, subparts A, G, H, I, R, S, U, Y, CC, DD, EE, GG, HH, OO, PP, QQ, SS, TT, UU, VV, YY, GGG, HHH, III, JJJ, MMM, OOO, VVV, FFFF, and GGGGG; and part 65, subparts A, F, and G.

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of this final rule amendment is available on the WWW through the Technology Transfer Network (TTN). Following signature, a copy of this final rule amendment will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at the following address: *http://www.epa.gov/ttn/oarpg/*. The TTN provides information and technology exchange in various areas of air pollution control.

Outline. The information in this preamble is organized as follows:

I. Background Information

A. What Is the Statutory Basis for This Action?

Current leak detection and repair (LDAR) requirements are primarily applicable to sources through EPA work practice standards promulgated under Clean Air Act (CAA) section 111 (New Source Performance Standards (NSPS)) and section 112 (National Emission Standards for Hazardous Air Pollutants (NESHAP)). These sections authorize EPA to promulgate work practice standards in lieu of numerical emission standards when ''it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard'' because the regulated pollutants ''cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant * * * or [because] the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations.'' 42 U.S.C. 7412(h)(1), (2); see also 42 U.S.C. 7411(h)(1), (2).

In promulgating such standards, we are not required to mandate a single work practice applicable to all sources in a source category but may instead provide several alternative work practice (AWP) options. Indeed, the United States Court of Appeals for the District of Columbia Circuit has indicated that EPA may provide sources with multiple work practice compliance options if EPA demonstrates that at least one of these options is cost effective and ''expressly provides for the alternative in the standard.'' Arteva Specialties S.R.R.L., d/b/a *KoSa* v. *EPA,* 323 F.3d 1088, 1092 (DC Cir. 2003).

Once promulgated, EPA retains the authority to provide additional work practice alternatives. Such authority exists under EPA's general authority to review and amend its regulations as appropriate, *e.g.,* 42 U.S.C. 7411(b)(1)(B), 42 U.S.C. 7412(d)(6).

B. What Did We Propose?

The proposed AWP allows owners or operators to identify leaking equipment using an optical gas imaging instrument instead of a leak monitor prescribed in 40 CFR part 60, Appendix A–7 *i.e.,* a Method 21 instrument. The new work practice requirements are identical to the existing work practice requirements except for those requirements which are directly or indirectly associated with the instrument used to detect the leaks; for example, owners or operators are still subject to the existing ''difficult to monitor,'' ''unsafe to monitor,'' repair, recordkeeping, and reporting requirements. If a leak is identified using the optical gas imaging instrument, then the leak must be re-screened after repair using the imaging instrument.

Owners or operators are required to use an optical gas imaging instrument capable of imaging compounds in the streams that are regulated by the applicable rule. The imaging instrument must provide the operator with an image of the leak and the leak source.

Prior to using the optical gas imaging instrument, owners and operators are required to determine the mass flow rate that the imaging instrument will be required to image. The optical gas imaging instrument is required to either meet a minimum detection sensitivity mass flow rate (provided in the proposed AWP) or owners or operators can calculate the mass flow rate for their process by prorating a standard detection sensitivity emission rate (provided in the proposed AWP) using equations provided in the amendatory language. If the owner or operator chooses to prorate the standard detection sensitivity, they are required to conduct an engineering analysis to identify the stream containing the lowest mass fraction of chemicals that have to be identified as detectable.

Owners or operators are required to conduct a daily instrument check to confirm that the optical gas imaging instrument is able to detect leaks at the emission rate specified in the amendatory language (or calculated by the owner or operator). The instrument check consists of using the optical gas imaging instrument to view the mass flow rate required to be met exiting a gas cylinder.

Owners or operators using the AWP are required to keep records of the detection sensitivity level used for the optical gas imaging instrument; the analysis to determine the stream containing the lowest mass fraction of detectable chemicals; the basis of the mass fraction emission rate calculation; documentation of the daily instrument check (either with the video recording device, electronically, or written in a log book); and the video record of the leak survey.

II. Summary of Changes to the Proposed Rule

A. Removal of the Minimum Detection Sensitivity Level Defaults

The proposed rule contained equations that could be used by facilities to adjust the detection sensitivity level (*i.e.,* 60 g/hr) based on the composition of the compounds in the process lines. EPA also provided facilities the option of meeting a minimum detection sensitivity level in lieu of adjusting the detection sensitivity level.

In the final rule, we removed the minimum detection sensitivity level. This change was made after reviewing concerns expressed by commenters that the minimum detection sensitivity level would allow an emissions loophole for high purity systems. (See Section III.A for rationale.)

B. Annual EPA Method 21 Monitoring While Complying With the AWP

In the final rule, we are requiring owners or operators choosing to use the AWP to screen equipment using EPA Method 21 (*i.e.*, Method 21) instead of the optical gas imaging instrument in one screening period a year. Owners or operators conducting the Method 21 screening must meet the requirements in the applicable subpart and keep records of all screened equipment. (See Section III.A of this preamble for rationale.) Records of the annual Method 21 screening are to be submitted to the Administrator via e-mail to *CCG-AWP@EPA.GOV*.

C. Re-Screening Repaired Equipment

In the final rule, we are allowing owners or operators to re-screen equipment after being repaired using either the current work practice or the AWP if the leaks were detected using the AWP. Leaks detected by the current work practice must be re-screened using the current work practice. (See Section III.B of this preamble for rationale.)

D. Recordkeeping for AWP Compliance

In the final rule, we are requiring that owners or operators keep records of the equipment, process units, or facilities that are to be included in the AWP to document that a facility has chosen to comply with the AWP. This documentation must be kept for as long as the AWP is used and the Administrator may request to review it. We are also requiring that owners or operators keep video records of the daily instrument check and the leak survey results. The video records must be kept for at least 5 years. (See Section III.E of this preamble for rationale.)

III. Response to Significant Comments

The proposal provided a 60-day comment period ending, June 5, 2006. We received comments from 23 commenters. Commenters included State agencies, industry, industry trade groups, environmental groups and individuals. We have summarized the significant comments below. A complete summary of comments is provided in the response to comments document which can be found in Docket EPA–HQ–OAR–2003–0199.

A. Basis of Standard

Comment: One commenter suggested that the basis of EPA's assessment of optical gas imaging is from data for sources never regulated for leaking equipment and is significantly outdated compared to current LDAR implementation.

Response: As discussed in the proposal preamble (71 FR 17403), the most reasonable approach to determine if the AWP is equivalent to the original work practice (based on Method 21) is to model the emission reductions that would occur if you were to apply both programs on an uncontrolled facility. This allows for a direct comparison between the effectiveness of the two approaches. As explained in the proposal, the original uncontrolled baseline Method 21 data used to develop the existing work practice would have been appropriate to make the comparison. Unfortunately, this 25-year-old database is no longer available. The only uncontrolled data available is from natural gas processing plants, which are used in the modeled comparison. These plants were screened with Method 21 instruments in the early 1990s as part of an EPA/industry effort to develop emission factors for the refinery and gas processing industry.

Comment: Several commenters opposed immediate and complete phase-out of Method 21 because equivalency has not been proven and the optical gas imaging instruments have questionable ability to image materials emitted at the detection sensitivity level (*i.e.*, threshold leak rates). Several commenters explained that the studies referenced by EPA do not take into account the fact that a single leak's emission rate will vary over time and depend on process conditions (such as chemical activity, temperature, and pressure), and the type and size of the equipment. One commenter suggested that EPA has presented no evidence to support the presumption that leaking equipment below the sensitivity of the optical gas imaging instrument will proceed to leak at a higher rate over time and be discovered due to increased frequency of monitoring. One commenter stated that if smaller leaks will not be detected with the gas imaging instrument, then a site may end up with many undetected small fugitive equipment leaks and could result in higher emissions rates.

Another commenter asserts that optical gas imaging is not currently technically equivalent to Method 21 because the camera cannot detect small leaks of less than 60 grams/hour (g/hr). The commenter also stated that the side-by-side comparison of Method 21 and the optical gas imaging technology shows there are significant differences in the detection rate. The commenter questioned whether the increased frequency of monitoring to detect larger leaks will actually compensate for the camera's inability to detect small leaks. The commenter added that high risk leaks of carcinogens will continue to leak until they become large enough to be detected by the camera.

Response: When using any imaging instrument, leak detection requires two primary factors for its use: (1) The leak definition and (2) the monitoring frequency. Together, these factors form the foundation of an LDAR program for identifying fugitive emissions from leaking equipment. The current work practice uses various leak definitions based on parts per million (ppm) and corresponding monitoring frequencies (monthly, quarterly, or annually) for identifying leaking equipment. Emissions reductions occur when leaking equipment is identified and repaired. In developing the AWP, EPA sought to design a program for using the optical gas imaging instrument that would provide for emissions reductions of leaking equipment at least as equivalent as the current work practice. To do so, we used the Monte Carlo model for determining what leak rate definition and what monitoring frequency were necessary for the AWP. The following provides a brief explanation of how we used that model to obtain the 60 g/hr leak rate threshold and a bi-monthly monitoring frequency. For a more detailed explanation of the

methodology used to develop the AWP, refer to the preamble for the proposed AWP (71 FR 17401).

Based on a 1993 petroleum industry study, EPA developed a statistical relationship between measured (bagged) mass emissions and the associated measured Method 21 screening values. This statistical relationship established the probability of registering a Method 21 screening value for a given range of mass emissions. The statistical relationship was then used to simulate detection of leaks by the Method 21 work practice in the computer model. The modeling program compares the screening value of Method 21 to various leak definitions to determine if a leak would be detected. Similarly, the model assigns a mass rate detection limit to the AWP. For each piece of equipment with a leak at or above the assigned mass detection limit, the program specifies detection by the AWP. Modeling results showed a work practice repeated bimonthly with a detection limit of 60 g/hr range was equivalent to the existing work practice. The model generated different detection limits for the 500 and 10,000 ppm thresholds in existing rules. The final rule reflects the mass detection limit for 500 ppm, *i.e.*, the most stringent limit in the Federal LDAR rules, thus, providing equivalency for both leak definitions.

The final AWP is not phasing out the existing Method 21-based LDAR work practice standards. Rather, the final rule allows owners/operators to choose to use the AWP in place of the current work practice wherever applicable. When used, the AWP provides equivalent control and appears to be less burdensome to implement. Additionally, industry has purchased many optical gas imagers and has had the opportunity to become proficient with their use. For these reasons, we expect the AWP to quickly come into widespread use. We see no reason why this is not a good outcome, especially given, as discussed below, that the final AWP includes an annual Method 21 monitoring requirement.

We disagree with the commenter's assertion that optical gas imaging cannot detect leaks at or less than 60 g/hr. The tests conducted using various optical imaging devices have shown that many gas imaging instruments detect emissions significantly below the 60 g/hr limit (Docket ID No. EPA–HQ–OAR–2003–0199–0027). Moreover, equivalence has been shown at a 60 g/hr leak rate, so it is not necessary that the optical gas imager detect leaks smaller than this level.

We also disagree that the side-by-side comparison of Method 21 and the AWP shows significant differences in mass of emissions detected. Available test data that we have reviewed shows that most of the mass emissions were detected by both Method 21 and the AWP (Docket ID No. EPA–HQ–OAR–2003–0199–0027, and the response to comments document which can be found in Docket EPA–HQ–OAR–2003–0199). The commenter did not provide data to support their assertion otherwise.

However, we recognize that modeling cannot address all of the uncertainties associated with equipment leaks because we lack sufficient information necessary to address all of the potential issues such as leak rates varying with time or with different operating scenarios. While commenters suggest these factors could affect the modeled equivalency determination, we are not aware of any specific data that shows this affect is real or that would allow us to include it in the equivalence modeling. As an example, one question not addressed by the modeling effort is the possibility that leak rates of the emitters below the imaging threshold of 60 g/hr will increase with time but stay below 60 g/hr and, therefore, not be imaged by the AWP. If the leak rate for the equipment currently leaking below the detectable threshold of the AWP gradually increases but stays below the detectable threshold, some situations may arise where cumulative emissions could exceed those emitted under the current program. We do not have evidence to support this scenario; however, we believe it prudent to protect against this scenario. Therefore, the final AWP requirements provide a transition to the new imaging technology. We have added an annual Method 21 screening to the AWP to address the concern of small leaks growing but not large enough to be detected with optical imaging. This requirement would take the place of one of the optical imaging screening surveys. The Method 21 screening must be conducted using the leak detection and repair requirements in the applicable subpart to which the equipment is subject and must be conducted for all equipment that are included in the AWP. Records of the annual Method 21 screening results must be kept. Records must identify the equipment screened, the screening value measured by Method 21, the time and date of the screening, and calibration information required in the existing applicable subparts. We recognize that including an annual Method 21 screening survey in the AWP will decrease the cost savings that may have occurred under the proposed requirement; however, we fully expect that the costs of the final AWP will be substantially less than those of the current work practice, so we hope that the added costs will not deter facilities from adopting the final AWP.

As industry adopts the AWP and reports to us their records of the results of the annual Method 21 monitoring, we will review this data to assess the extent to which small leaks go undetected and become larger while remaining undetected. We will consider these results, along with other relevant information, in any future revisions to the AWP.

Comment: One commenter requested EPA explain the relationship between the 60 g/hr threshold and the 500, 1,000, 2,000, and 10,000 ppm concentration cutoffs in the existing LDAR regulations. The commenter suggested that EPA set up different leak definitions to recognize that some equipment inherently leak less material than others and thus only need to be repaired after reaching the specified leak level. The commenter also indicated that the increased leak definition for auto-polymerizing compounds were included in most LDAR regulations to recognize that these materials are less likely to leak into the atmosphere. The commenter concluded that the 60 g/hr leak threshold does not recognize any of the specific situations that have caused EPA to promulgate these provisions.

Two commenters suggested that the equivalency analysis does not show that the gas imaging leak threshold of 60 g/hr is equivalent to a Method 21 measurement of 500 ppm, especially when connectors and other equipment are considered. Another commenter added that another study showed that an equivalent leak threshold for flanges is 24 g/hr instead of 60 g/hr. The commenter requested that EPA justify applying the same leak threshold to virtually all types of equipment. The commenter also stated that another study showed the equivalent leak threshold for valves was 36 g/hr, and suggested using this stricter standard.

Response: The explanation of the relationship between the 60 g/hr leak threshold and various leak definitions is provided in EPA's discussion of the Monte Carlo analysis (Docket ID No. EPA–HQ–OAR–2003–0199–0005). Additionally, as explained in the response above, the equivalency determination was based on comparing the current work practice leak definition and monitoring frequency requirements with various leak rates and monitoring frequencies generated by the Monte Carlo model. We modeled the most stringent leak definition (500 ppm) to

determine the leak threshold for the AWP under the assumption that if a source could meet the most stringent leak threshold, it could meet less stringent leak definitions in any of the Federal equipment leak standards.

The 60 g/hr leak threshold, when monitored bi-monthly, is the modeled equivalent for the vast majority of LDAR programs. Other equipment subject to LDAR rules is monitored at a higher leak definition (*i.e.*, 1,000 ppm, 2,000 ppm, 10,000 ppm) and monitored less frequently (*i.e.*, quarterly or annually). Thus, facilities using the AWP to monitor these other pieces of equipment should see results at least as stringent as using the current work practice. We lacked sufficient bagging data on other equipment to develop correlations using the model. However, the bagging data for those other pieces of equipment could be, and was, used to validate the results from the Monte Carlo analysis.

One commenter referred to an industry study showing that if a different dataset consisting of information from southern California refineries were used in the Monte Carlo analysis, the equivalent leak threshold for valves would be 36 g/hr and flanges would be 24 g/hr. There are several reasons why the California data is not appropriate for the analysis. First we would note that the dataset from the California refineries was from refineries where equipment leak standards were already in place and leak thresholds would be lower. Such a dataset from controlled facilities would not be appropriate for the equivalency analysis. As discussed in the proposal preamble and in previous responses, a technically defensible equivalency determination of any AWP requires modeling of an uncontrolled facility. Second, the equipment leak work practice requirements in the California rules, which the refineries would be subject to, are not identical to those in EPA regulations with Method 21. There were significant differences between Method 21 requirements and the requirements for equipment leaks in California such that screening results from the two are not equivalent. To make a comparison with EPA's Monte Carlo analysis, the California data was modified to approximate the requirements of Method 21. However, this modification is only an approximation and does not exactly replicate Method 21 results. Third, we also note that the leak threshold of 24 g/hr for flanges was calculated assuming quarterly monitoring. However, the EPA requirements for flanges only require monitoring about every 2 years. To conduct a proper model for flanges, the analysis would need to be run on a 2-year basis. As stated in the report (Docket ID No. EPA–HQ–OAR–2003–0199–0032), ''the equivalent AWP (leak threshold) increases as the AWP monitoring frequency increases.'' This trend implies an equivalent leak threshold based on the existing 2-year monitoring requirement would be much higher than the 24 g/hr number and likely above 60 g/hr.

Regarding auto-polymerizing compounds, we lack sufficient information to equate mass leak rates to concentration levels for them. The commenter did not provide any additional information that would allow us to do so. Therefore, we are not providing leak thresholds specific to auto-polymerizing compounds. We acknowledge the AWP may result in more stringent control than the current work practice required in equipment leak standards for polymers and resins because the model analysis used to develop the AWP was conducted at a leak definition of 500 ppm, the most stringent leak definition in Federal rules, and using data from natural gas processing plants. If the owner or operator considers the AWP not to be appropriate for their facility they can continue to use the current work practice to identify leaking equipment.

Comment: One commenter suggested that using the optical gas imaging instrument may miss intermittent leaks, which may add significantly to fugitive emissions. The commenter added that the AWP needs to account for how at certain times potentially large leaks can be disguised as small leaks.

Response: Previous EPA studies have shown that most emissions are from equipment with the larger leaks. (Docket ID No. EPA–HQ–OAR–2003–0199–0044) Prior to leak detection and repair programs, 95 percent of the mass emissions were emitted from 5 percent of the equipment, *i.e.*, equipment leaking at greater than 10,000 ppm. Additionally, tests conducted to ascertain the performance of optical gas imaging cameras show that the cameras identified all leaks greater than 60 g/hr (Docket ID No. EPA–HQ–OAR–2003–0199–0027, and the response to comments document which can be found in Docket EPA–HQ–OAR–2003–0199). These results show that the AWP will achieve EPA's goals of detecting leaking equipment from which the majority of emissions arise. As a point of comparison, we would also note that the current work practice can erroneously register low ppm readings below the leak threshold for large emitters, *i.e.*, the current work practice can show a broad range of readings for the same mass emission. Therefore, the current work practice also would not identify all leaking equipment. Also, neither the current work practice nor the AWP will identify intermittent leaks because these leaks occur when equipment is not monitored.

The final rule also requires that any leak, no matter how small, viewed by the optical gas imaging instrument is considered a leak and must be repaired. The performance tests show that the camera can in practice ''see'' leaks as low as 10 g/hr, which is below the 60 g/hr leak threshold determined to be equivalent to the current work practice. As a result, the cameras will identify equipment leaking below the 60 g/hr leak threshold and those leaks are required to be repaired. Thus, a large leak that could be ''disguised'' as a smaller leak under the current work practice would not be misidentified and avoid repair.

Comment: One commenter suggested that a loophole in the AWP allows inspectors to bypass proper adjustments for high purity systems containing undetectable chemicals. The commenter explained that the optical gas imaging instrument can only detect volatile organic compounds (VOC) that absorb or emit infrared light. In the synthetic organic chemicals manufacturing industry, high purity systems are common, and leaks can go undetected if the dominant chemical does not register with optical gas imaging technology. The commenter added that the proposal contains a loophole that gives the inspector the option of using a minimum mass flow rate threshold of either 10 g/hr for pumps or 6 g/hr for all other equipment instead of adjusting the threshold to accommodate the instrument's detection limits. The commenter questioned EPA's assumption that all leaks encountered during an inspection contain at least 10 percent detectable chemicals. The commenter recommended that EPA remove this loophole by eliminating section 60.18(i)(2)(i)(B) from the rules. The commenter also recommended that Method 21 be used for high purity situations where chemicals have not been verified as adequately detectable using the optical gas imaging technology. The commenter concluded that if EPA chooses to keep the loophole, it should address whether the technology fails to detect a high number of leaks that are smaller than 6 g/hr.

Response: After further review of the commenter's concerns, we have determined that the commenter is correct regarding the minimum detection sensitivity level provided in the tables. The potential exists for high

purity systems to have leaks not identified if the minimum detection sensitivity level is used instead of being calculated. Consequently, the final rule requires that the detection sensitivity level be calculated using the equation in section 60.18(i)(2)(i). The minimum detection sensitivity level concept has been removed from the final rule. We also note that the optical gas imaging instrument is allowed to be used only where it will respond to the equipment leaking. Therefore, if the instrument does not respond to high purity streams, it cannot be used to detect leaks. The current work practice using Method 21 must be used instead.

B. Applicability

Comment: One commenter requested that EPA clarify that a facility is not required to monitor equipment using Method 21 and the AWP.

Response: The standard is an alternative to the existing work practice and may be used in place of the existing work practice where feasible and whenever the owner or operator chooses to do so. We are not requiring that both be used at the same time. We are requiring that each facility choosing to use the AWP monitor the same regulated equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor once per year.

Comment: Several commenters suggested that leaks identified using the gas imaging instrument should be verified using traditional Method 21. Another commenter opposed allowing Method 21 to be used to check for leaks found with optical imaging. The commenter suggested that the methods could give contradictory results and would serve no purpose. The commenter added that because EPA states in the proposal that the AWP provides equivalent or better emissions control than Method 21, there is no justification for requiring both methods to be applied to the same equipment.

Two commenters also requested that EPA consider allowing facilities the option to use Method 21 or the Gas imaging AWP for post repair monitoring requirements. The commenters opposed the required approach of being limited to the same method for repair monitoring.

Response: We do not believe that leaks identified in the initial screening using the AWP need to be screened using the current work practice to verify the leak. By definition in the AWP, a leak is any emissions imaged by the optical gas imaging instrument. Requiring the facility to use a Method 21 monitor to verify what the optical gas imaging instrument has already detected would be an unnecessary duplication of effort and resources.

On the other hand, we have decided that it would be appropriate to allow either the current work practice or the AWP to be used for repair purposes when the AWP is used for the initial screening. Test information has demonstrated that a Method 21 instrument will detect leaks that the gas imaging instrument will detect (Docket ID No. EPA–HQ–OAR–2003–0199–0027, and the response to comments document which can be found in Docket EPA–HQ–OAR–2003–0199). Therefore, it is appropriate to allow its use when optical gas imaging instruments are used to find leaks. If a Method 21 instrument is used for repair monitoring, the leak definition in the applicable subpart to which the equipment is subject must be used to determine if the repair is successful. However, the AWP instrument will not be allowed to verify the repair has been made after the Method 21 instrument is used for the once-a-year monitoring.

Comment: Several commenters suggested that an owner or operator should be able to selectively apply the proposed AWP to a part of the facility, part of a process unit, or even individual equipment. The commenters added that selective application of the AWP is appropriate because optical gas imaging technology is new and few facilities have experience with it, differences within a facility suggest the use of Method 21, or the AWP to various parts of the plant, and it would encourage the development of the technology.

Response: We agree with the commenters' suggestion. The AWP may be used for the entire facility, a process unit, or a group of equipment. The decision is up to the owner or operator how broadly the AWP will be used. The owner or operator is required to keep records of where the AWP will be used as part of the documentation of the detection sensitivity level value.

Comment: Two commenters suggested that EPA should allow flexible use of the AWP by allowing facilities to move from traditional monitoring to optical imaging and vice versa without being subject to a permitting approval process. The commenters added that a facility cannot switch from one technology to another without assuring that monitoring frequencies and protocols are fully addressed upon switching.

Response: The flexibility that the commenters are requesting is beyond the scope of this action. The issues need to be raised in the context of the title V program and the specifics of individual facility permits.

Comment: Several commenters supported using the AWP for monitoring closed vent systems. Another commenter suggested that most pressure relief vents (PRV) are installed in closed vents routed to control devices. Therefore, optical sensing methods cannot evaluate emissions inside a closed vent conveyance. The commenter concluded that the AWP must allow mixed monitoring methods for closed vents. One commenter asserted that the AWP has to be applicable for a 500 ppm leak and any change to the standard for monitoring closed vent systems would be outside the scope of the AWP. One commenter recommended that the owner or operator be given the option of using either Method 21 or an optical imaging camera to monitor PRV after the pressure releases.

One commenter supported the lower leak rates for closed vent systems (*e.g.*, 3 g/hr) but noted that the leak rate would be for mass flow for a bi-monthly inspection schedule. The commenter added that closed vent systems are typically inspected on an annual basis and the equivalent leak rate, using the Monte Carlo analysis, for annual inspection would be 0.013 g/hr, which is below the range that the technology can reliably find leaks. The commenter added that to allow use of the optical gas imaging technology to monitor closed vent systems, EPA must create a revised inspection schedule which balances frequency with limitations of the optical technology. The commenter also added that if the optical imaging technology cannot reliably measure emissions at low leak rates, Method 21 should be used. The commenter stated that supplementing the optical gas imaging technology with Method 21 would catch more small leaks characteristic of closed vent systems.

Response: In the preamble to the proposed rule, we took comment on whether the AWP was appropriate for closed vent systems but did not include language to permit such use. We have evaluated the commenters' concerns and have decided that the AWP is not appropriate for monitoring closed vent systems, leakless equipment, or equipment designated as non-leaking. While the AWP will identify leaks with larger mass emission rates, tests conducted with both the AWP and the current work practice indicate the AWP, at this time, does not identify very small leaks and may not be able to identify if non-leaking/leakless equipment are truly nonleaking because the detection sensitivity of the optical gas imaging instrument is not sufficient. Therefore, in the final rule, as in the proposed rule,

we have decided not to allow the AWP to be used for closed vent systems, leakless equipment, or equipment designated as non-leaking.

Comment: Several commenters supported using the optical imaging technology to find, review, and fix non-regulated and previously non-detectable leaks without additional regulatory burden and fear of reprisal from enforcement actions. One commenter suggested that the camera be used as a form of enhanced visual inspection to quickly identify whether a group of equipment has passed or failed and that result be stored in a database. Then, the camera and recorded video could be used to target only the leaking equipment. Another commenter supported using the optical imaging device as a screening tool for leaks so that annual Method 21 leak checks could be targeted to equipment suspected of leaking.

Other commenters asserted that the AWP should require that all leaks detected with optical gas imaging be corrected according to the existing leak correction time requirements, regardless of whether or not the equipment would have been required to be monitored using Method 21. One commenter added that if the operator monitors leaks outside of the EPA requirement, the AWP should require the company maintain records. The commenter stated this would prevent operators from repairing leaks just prior to an official inspection and reporting artificially low levels. One commenter requested that the AWP also apply to inaccessible and unsafe to monitor equipment. The commenter also suggested that expanding the inventory would reduce the number of large leakers, and reduce the cost to the plant by enabling the plant to repair large leakers rather than an inventory of equipment which they are mandated to monitor and repair.

Response: The AWP requirements are intended to provide an alternative to the current work practices using Method 21. Requirements in the existing subpart that are specific to Method 21 do not apply to the AWP. All other requirements in the applicable subpart that are not specifically addressed in the AWP apply, such as schedule for repairs, designation of difficult to monitor equipment and unsafe to monitor equipment. Therefore, the schedule for repairing leaks is the same for both work practices. The final rule changes were not intended to expand the applicability of the existing rules. The Agency has promulgated the AWP to facilitate the use of emerging technology as quickly as appropriate. Once the regulated community and EPA have more experience with the AWP, we may consider expanding the applicability of the existing rules.

Comment: Several commenters provided input on definitions for ''difficult to access'' or ''unsafe to access'' or ''unsafe to repair'' or ''difficult to repair.'' Several commenters requested EPA include the concept of ''difficult to access'' in the AWP because access is still required to make repairs and in some cases this may not be possible. One commenter suggested replacing the term ''difficult to access'' with ''unsafe to access.'' One commenter also suggested adding a definition for ''unsafe to access'' equipment because the AWP would allow more frequent monitoring of these equipment due to the nature of the technology, but does not address the repair requirements for such equipment. One commenter suggested for equipment designated as ''difficult to access'' repair be required as soon as practical but no later than 90 days. Equipment identified as ''unsafe to access'' should be required to be repaired when it is safe to do so. One commenter requested EPA to describe how facilities switching to the AWP would manage their ''difficult to monitor'' lists.

Response: The interpretations of the terms ''difficult to monitor,'' ''difficult to repair,'' or ''unsafe to monitor'' are driven by work practice in use and therefore are not addressed in this section. We expect the population of equipment so designated under the existing work practice will change to accommodate the differing capabilities of the AWP instrument. Therefore, we are not addressing ''difficult to monitor,'' ''difficult to repair'' or ''unsafe to monitor.''

C. Rule Location

Comment: Several commenters supported locating the AWP in the General Provisions. However, many of the commenters requested that the AWP be located in the General Provisions to each applicable Part rather than only in Part 60. Other commenters preferred that Method 21 be revised to include the AWP rather than include language in the General Provisions.

Several commenters supported including the amendatory language in each applicable subpart and opposed having it in only one Part. The commenters suggested that the proposed method would result in numerous inconsistencies with the subparts and would be confusing.

Two commenters suggested that the proposed language in the 40 CFR part 60 General Provisions was legally insufficient. One of the commenters asserted that EPA must incorporate the AWP into all subparts where it will be readily apparent to the affected industry groups, regulators, and the public.

Response: We believe there is no simple way to incorporate the AWP into the numerous subparts. The General Provisions appear to be the most efficient way to accommodate the desired amendments, so in response to the comments received, we have decided to incorporate the AWP into the General Provisions of parts 60, 63, and 65. The AWP is also applicable to those subparts in part 61 that reference the General Provisions in part 60. Additionally, where specific subparts require modification (such as tables in Part 63 subparts that reference General Provisions sections), we have made the appropriate revisions. The suggestion to incorporate the AWP into Method 21 is both inappropriate and awkward because Method 21 contains a test method only and should not contain recordkeeping, reporting, and monitoring requirements.

D. Alternative Work Practice Procedures and Equipment Specifications

Comment: One commenter requested that use of the optical imaging technology be complemented with Method 21 as necessary to compensate for shortcomings in the camera design. The commenter noted the differences between active and passive cameras and their vulnerabilities, as well as interferences from carbon dioxide and steam/water, use outdoors, and the color of the background. The commenter recommended that the AWP should fully address the limitations of each technology and require that inspectors identify and make records of equipment types that are poor candidates for either kind of optical gas imaging technology.

Response: The AWP can only be used to detect leaks when the gas imaging instrument is shown to work (i.e., streams that contain compounds that can be detected by the gas imaging instrument). Therefore, if a specific type of gas imaging device does not work on a stream, operators will continue to use the Method 21-based work practice for these equipment. Although this commenter did not provide any data supporting the need to augment the AWP with the Method 21 instrument, as explained earlier, we are requiring annual monitoring with the Method 21 instrument. (See section III.A of this preamble for a discussion of this requirement.)

Comment: One commenter requested EPA to explain how a facility would identify which analytical methods

should be used for which compounds, especially when potentially incompatible compounds may be included in a mixture within a group of emission equipment. The commenter added that it would be unfair to penalize a facility by prohibiting the use of the AWP because the AWP cannot detect all VOC in a specific process unit.

Another commenter requested clarification that the requirement in 40 CFR 60.18(i)(1) that imaging the compounds in the streams does not mean or imply that every compound in the stream must be detected.

Response: The AWP does not require that every compound in the stream be detected. Only one compound needs to be able to be viewed. However, the 60 g/hr leak rate threshold must be adjusted, *i.e.*, scaled down, to account for compounds that are not seen. The language in the final rule was modified to clarify this point.

Comment: One commenter requested that petroleum refineries be exempt from the stream speciation and variability of process stream requirements because petroleum refineries were used in the development of the standard and because the mixed hydrocarbons contained in the streams have been demonstrated to meet all the monitoring criteria. The commenter specifically opposed requiring an engineering analysis. The commenter suggested adding language that allows the determination to be based on the process knowledge that an image from the camera is not a leak if that image is determined to be steam or other unregulated material.

Response: In the proposed rule, we provided a definition for ''engineering analysis'' that described the requirements for determining the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable. In the final rule, we have decided to put the requirements for the analysis directly in the rule rather than have a separate definition.

In the final rule, we are requiring owners or operators to determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable. It is up to the owner or operator to provide sufficient information to meet this requirement. This information may include process knowledge, previous studies, or analyses conducted for the AWP. The documentation of the analysis is required to be kept as a record for as long as the AWP is used and must be updated to incorporate any changes that may affect the analysis. The Administrator may request to review the documentation. Because this requirement is now in the rule, it is not necessary to include it in the term ''engineering analysis.'' Therefore, in the final rule, the term ''engineering analysis'' has been removed.

We also disagree that petroleum refineries should be exempted from the stream speciation and variability of process stream requirements. The commenter's reasoning is not a sufficient justification for such an exemption because, although some refinery streams were used to develop the method, there are a wide variety of refineries with varying streams and without site specific analysis we have no assurance that the required leak rate can be imaged.

E. Recordkeeping and Reporting

Comment: One commenter requested the owner or operator of an affected source be required to submit notice to the Administrator that they have elected to use the AWP and state the duration the AWP will be used.

Response: For the final rule, we have required a memorandum to the owner's or operator's file identifying the equipment, process units, or facilities that are to be included in the AWP to document that a facility has chosen to comply with the AWP. This documentation must be kept for as long as the AWP is used and the Administrator may request to review it. It is not necessary to submit notification to the Administrator that the AWP will be used. Owners or operators are still required to meet the requirements in the subpart except where they are superseded by the AWP. Therefore, the same reports and records kept for the current work practice will be required for the AWP.

Comment: Several commenters requested that EPA allow owners/operators the option of keeping video records to provide flexibility; others opposed requiring keeping video records. Several commenters added that recordkeeping for the AWP should not be more burdensome than the applicable subparts. The commenters noted that the AWP will add significant burden to facilities and regulators. One commenter stated that facilities will incur burden from additional storage of electronic files. The commenter provided estimates of the amount of electronic storage space that would be necessary, indicating as much as 50 gigabytes would need to be stored per inspection. The commenter added that EPA should consider the time needed to transfer large files between field data collection devices and the plant's computer in the time necessary to use the AWP. One commenter expressed concern about maintaining videos of every leak survey, especially if the AWP requires that each piece of equipment be imaged separately. The commenter noted that the battery life of the camera and recorder are limited, storage of the videos will be burdensome, and data retrieval will require searching the videos and will be cumbersome.

Other commenters suggested that video records of the daily instrument check should be required. One commenter recommended EPA maintain the documentation requirements for monitoring of all equipment. The commenter asserted that video documentation is an important enforcement tool and is a safeguard against fraud. The commenter disputed industry assertions of the cost of keeping video records and suggested that computer storage represents only a fraction of the costs of the LDAR program.

Response: The final rule requires that if the owner or operator chooses to use the AWP, video records of all viewed regulated equipment and video records of the daily instrument check must be kept for 5 years. We recognize that data files for video records may be large. However, to ensure that the AWP is being complied with, we believe it is necessary to require video records of each piece of equipment that is viewed. We would also like to reiterate that the standard is an AWP. If owners or operators believe that the video recordkeeping requirements are too burdensome, they may continue to comply with the existing requirements as written. We also note that the AWP is not superceding the recordkeeping and reporting requirements that are in the existing equipment leak standards. The owner or operator must still keep those records. However, in the final rule a video record can be used to meet the recordkeeping requirements of the applicable subparts if each piece of regulated equipment selected for this work practice can be identified in the video record.

F. Other Comments

Comment: One commenter asked EPA to clarify whether a requirement that the instrument be intrinsically safe will be incorporated into the AWP. One commenter suggested that a significant burden will be incurred by requiring instruments that are intrinsically safe. The commenter added that EPA is requiring that personnel take into hazardous areas data storage devices that are not intended for that purpose.

Response: We are not requiring that gas imaging instruments be intrinsically safe. It is incumbent upon the

manufacturer to develop instruments that are designed to meet the requirements of the chemical facility or refinery. Facilities may or may not require equipment be intrinsically safe. The owner or operator is not being required to use the AWP. If such instruments are not available, and the operator requires intrinsically safe instruments, then the owner or operator does not have to choose to use the AWP.

Comment: Several commenters requested that EPA provide guidance on how a facility would calculate emission rates for emission inventories if the AWP is in use. One commenter specifically asked how a facility would manage default zero equipment for emission estimation purposes. Several commenters added that if guidance is not provided, EPA should revise the AWP to include quantification procedures consistent with EPA's preferred methodology. One commenter asserted that optical gas imaging is limited by its inability to quantify leak concentration, which are converted to emission rates using the correlation equations. The commenter added that facilities must be required to use Method 21 or an equivalent emissions estimation technique to quantify leaks detected with optical gas imaging. Another commenter suggested that gas imaging technology has the ability to quantify emissions; therefore, quantification should be required in the AWP.

Response: The Agency recognizes the need for new approaches to estimate emissions from facilities that implement the AWP. We will work with stakeholders to develop the necessary tools for quantification. In the final rule, we are also requiring each facility complying with the AWP also monitor the same regulated equipment with a Method 21 monitor once per year. The data gathered from this requirement will help us address the issue of emissions quantification.

Comment: One commenter considered that public notification of the rulemaking was incomplete and inadequate because the title and summary of the proposed rule only addressed 40 CFR part 60 but the proposal would amend 40 CFR parts 61, 63, and 65 as well. The commenter added that before EPA promulgates the AWP, it needs to propose the AWP for parts 61, 63, and 65.

Response: We believe that sufficient notification was provided that the AWP would apply to subparts other than in 40 CFR part 60. The proposed rule specifies in 40 CFR 60.18(a)(2) that the AWP is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor. The rule clearly states that the AWP applies to 40 CFR parts 60, 61, 63, and 65. Similarly, the preamble to the proposed rule states that it applies to 40 CFR parts 60, 61, 63, and 65.

IV. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

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

The information collection requirements in this rule have been submitted for approval to the Office of Management and Budget (OMB) under the *Paperwork Reduction Act,* 44 U.S.C. 3501, *et seq.* The information collection requirements are not enforceable until OMB approves them.

This final rule provides plant operators with an alternative method for identifying equipment leaks, but does not change the basic recordkeeping and reporting requirements in the various subparts of 40 CFR parts 60, 61, 63, and 65. However, EPA anticipates that this final rule will change the burden estimates developed and approved for the existing national emission standards by reducing the labor hours necessary to identify equipment leaks.

An ICR document (EPA ICR No. 2210.02) was prepared for this final rule to estimate the costs associated with reading and understanding the alternatives, purchasing an optical imaging instrument, and initial training of plant personnel. The ICR has been approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501, *et seq.* The annual public burden for this collection of information (averaged over the first 3 years after the effective date of the final rule) is estimated to total 3,027 labor hours per year and a total annual cost of $2,260,189. EPA has established a public docket for this action (Docket EPA–HQ–OAR–2003–0199) which can be found at *http://www.regulations.gov.* The ICR for this final rule is included in the public docket. Burden is defined at 5 CFR 1320.3(b).

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9. In addition, EPA is amending 40 CFR part 9 in the **Federal Register** to display the OMB control number for the approved information collection requirements contained in this final rule.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) 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 impacts of the final rule on small entities, small entity is defined as follows: (1) A small business whose parent company has fewer than 100 to 1,500 employees, or a maximum of $5 million to $18.5 million in revenues, depending on the size definition for the affected North American Industry Classification System (NAICS) code; (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 in its field. It should be noted that the small business definition applied to each industry by NAICS code is that listed in the Small Business Administration size standards (13 CFR part 121).

After considering the economic impact of this final 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 analysis is to identify and address regulatory alternatives ''which minimize any significant economic impact of the rule on small entities.'' 5 U.S.C. 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.

We have concluded that this final rule imposes no additional burden on

facilities impacted by existing EPA regulations. This final rule allows plant operators to voluntarily use an AWP. In fact, EPA expects the AWP will relieve regulatory burden for all affected entities by reducing the labor hours necessary to identify equipment leaks.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act (UMRA) of 1995, Public Law 104–4, establishes requirements for Federal Agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if EPA publishes with the final rule an explanation why that alternative was not adopted.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, EPA must have developed, under section 203 of the UMRA, a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA's regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

This final rule contains no Federal mandates (under the regulatory provisions of Title II of the UMRA) for State, local, or tribal governments or the private sector. This final rule imposes no enforceable duty on any State, local or tribal governments or the private sector. Thus, this final rule is not subject to the requirements of sections 202 and 205 of the UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132 (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have Federalism implications.'' ''Policies that have Federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among various levels of government.''

This final rule 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 final rule will not impose direct compliance costs on State or local governments, and will not preempt State law. Thus, Executive Order 13132 does not apply to this rule.

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

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.'' This final rule does not have tribal implications, as specified in Executive Order 13175. It will not have substantial direct effects on Tribal governments, 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, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to this rule.

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

EPA interprets EO 13045 (62 FR 19885, April 23, 1997) 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 action is not subject to EO 13045 because it is based solely on technology performance.

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

This rule is not a ''significant energy action'' as defined in Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (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. Further, we have concluded that this rule is not likely to have any adverse energy effects.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Pub. L. 104–113; 15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, business practices) that are developed or adopted by one or more voluntary consensus bodies. The NTTAA directs EPA to provide Congress, through OMB, with explanations when EPA does not use available and applicable VCS.

This final rule does not involve technical standards. Therefore, the requirements of the NTTAA are not applicable.

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

Executive Order 12898 (59 FR 7629, February 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 final action will not have disproportionately high and adverse health or environmental effects on minority or low-income populations because it increases the level of environmental protection 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. This final action would not relax the control measure on sources regulated by the rule and, therefore, would not cause emissions increases from these sources.

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. EPA will submit a report containing this final 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**. A Major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2). This final rule will be effective December 22, 2008.

List of Subjects

40 CFR Part 60

Administrative practice and procedure, Air pollution control, Reporting and recordkeeping requirements.

40 CFR Part 63

Administrative practice and procedure, Air pollution control, reporting and recordkeeping.

40 CFR Part 65

Administrative practice and procedure, Air pollution control.

Dated: December 15, 2008.

Stephen L. Johnson,

Administrator.

■ For the reasons stated in the preamble, title 40, chapter I, of the Code of Federal Regulations is amended as follows:

PART 60—[AMENDED]

■ 1. The authority citation for part 60 continues to read as follows:

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

Subpart A—[Amended]

■ 2. Section 60.18 is amended:

■ a. By revising the section heading;

■ b. By revising paragraph (a); and

■ c. By adding paragraphs (g), (h), and (i) to read as follows:

§ 60.18 General control device and work practice requirements.

(a) *Introduction.* (1) This section contains requirements for control devices used to comply with applicable subparts of 40 CFR parts 60 and 61. The requirements are placed here for administrative convenience and apply only to facilities covered by subparts referring to this section.

(2) This section also contains requirements for an alternative work practice used to identify leaking equipment. This alternative work practice is placed here for administrative convenience and is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

* * * * *

(g) *Alternative work practice for monitoring equipment for leaks.* Paragraphs (g), (h), and (i) of this section apply to all equipment for which the applicable subpart requires monitoring with a 40 CFR part 60, Appendix A–7, Method 21 monitor, except for closed vent systems, equipment designated as leakless, and equipment identified in the applicable subpart as having no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. An owner or operator may use an optical gas imaging instrument instead of a 40 CFR part 60, Appendix A–7, Method 21 monitor. Requirements in the existing subparts that are specific to the Method 21 instrument do not apply under this section. All other requirements in the applicable subpart that are not addressed in paragraphs (g), (h), and (i) of this section apply to this standard. For example, equipment specification requirements, and non-Method 21 instrument recordkeeping and reporting requirements in the applicable subpart continue to apply. The terms defined in paragraphs (g)(1) through (5) of this section have meanings that are specific to the alternative work practice standard in paragraphs (g), (h), and (i) of this section.

(1) *Applicable subpart* means the subpart in 40 CFR parts 60, 61, 63, or 65 that requires monitoring of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

(2) *Equipment* means pumps, valves, pressure relief valves, compressors, open-ended lines, flanges, connectors, and other equipment covered by the applicable subpart that require monitoring with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

(3) *Imaging* means making visible emissions that may otherwise be invisible to the naked eye.

(4) *Optical gas imaging instrument* means an instrument that makes visible emissions that may otherwise be invisible to the naked eye.

(5) *Repair* means that equipment is adjusted, or otherwise altered, in order to eliminate a leak.

(6) *Leak* means:

(i) Any emissions imaged by the optical gas instrument;

(ii) Indications of liquids dripping;

(iii) Indications by a sensor that a seal or barrier fluid system has failed; or

(iv) Screening results using a 40 CFR part 60, Appendix A–7, Method 21 monitor that exceed the leak definition in the applicable subpart to which the equipment is subject.

(h) The alternative work practice standard for monitoring equipment for leaks is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

(1) An owner or operator of an affected source subject to CFR parts 60, 61, 63, or 65 can choose to comply with the alternative work practice requirements in paragraph (i) of this section instead of using the 40 CFR part 60, Appendix A–7, Method 21 monitor to identify leaking equipment. The owner or operator must document the equipment, process units, and facilities for which the alternative work practice will be used to identify leaks.

(2) Any leak detected when following the leak survey procedure in paragraph (i)(3) of this section must be identified for repair as required in the applicable subpart.

(3) If the alternative work practice is used to identify leaks, re-screening after an attempted repair of leaking equipment must be conducted using either the alternative work practice or the 40 CFR part 60, Appendix A–7, Method 21 monitor at the leak definition required in the applicable subpart to which the equipment is subject.

(4) The schedule for repair is as required in the applicable subpart.

(5) When this alternative work practice is used for detecting leaking equipment, choose one of the monitoring frequencies listed in Table 1 to subpart A of this part in lieu of the monitoring frequency specified for regulated equipment in the applicable subpart. Reduced monitoring frequencies for good performance are not applicable when using the alternative work practice.

(6) When this alternative work practice is used for detecting leaking equipment the following are not applicable for the equipment being monitored:

(i) Skip period leak detection and repair;

(ii) Quality improvement plans; or

(iii) Complying with standards for allowable percentage of valves and pumps to leak.

(7) When the alternative work practice is used to detect leaking equipment, the regulated equipment in paragraph (h)(1)(i) of this section must also be monitored annually using a 40 CFR part 60, Appendix A–7, Method 21 monitor at the leak definition required in the applicable subpart. The owner or operator may choose the specific monitoring period (for example, first quarter) to conduct the annual monitoring. Subsequent monitoring must be conducted every 12 months from the initial period. Owners or operators must keep records of the annual Method 21 screening results, as specified in paragraph (i)(4)(vii) of this section.

(i) An owner or operator of an affected source who chooses to use the alternative work practice must comply with the requirements of paragraphs (i)(1) through (i)(5) of this section.

(1) Instrument Specifications. The optical gas imaging instrument must comply with the requirements in (i)(1)(i) and (i)(1)(ii) of this section.

(i) Provide the operator with an image of the potential leak points for each piece of equipment at both the detection sensitivity level and within the distance used in the daily instrument check described in paragraph (i)(2) of this section. The detection sensitivity level depends upon the frequency at which leak monitoring is to be performed.

(ii) Provide a date and time stamp for video records of every monitoring event.

(2) Daily Instrument Check. On a daily basis, and prior to beginning any leak monitoring work, test the optical gas imaging instrument at the mass flow rate determined in paragraph (i)(2)(i) of this section in accordance with the procedure specified in paragraphs (i)(2)(ii) through (i)(2)(iv) of this section for each camera configuration used during monitoring (for example, different lenses used), unless an alternative method to demonstrate daily instrument checks has been approved in accordance with paragraph (i)(2)(v) of this section.

(i) Calculate the mass flow rate to be used in the daily instrument check by following the procedures in paragraphs (i)(2)(i)(A) and (i)(2)(i)(B) of this section.

(A) For a specified population of equipment to be imaged by the instrument, determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, within the distance to be used in paragraph (i)(2)(iv)(B) of this section, at or below the standard detection sensitivity level.

(B) Multiply the standard detection sensitivity level, corresponding to the selected monitoring frequency in Table 1 of subpart A of this part, by the mass fraction of detectable chemicals from the stream identified in paragraph (i)(2)(i)(A) of this section to determine the mass flow rate to be used in the daily instrument check, using the following equation.

$$E_{dic} = (E_{sds}) \sum_{i=1}^{k} x_i$$

Where:

E_{dic} = Mass flow rate for the daily instrument check, grams per hour

x_i = Mass fraction of detectable chemical(s) i seen by the optical gas imaging instrument, within the distance to be used in paragraph (i)(2)(iv)(B) of this section, at or below the standard detection sensitivity level, E_{sds}.

E_{sds} = Standard detection sensitivity level from Table 1 to subpart A, grams per hour

k = Total number of detectable chemicals emitted from the leaking equipment and seen by the optical gas imaging instrument.

(ii) Start the optical gas imaging instrument according to the manufacturer's instructions, ensuring that all appropriate settings conform to the manufacturer's instructions.

(iii) Use any gas chosen by the user that can be viewed by the optical gas imaging instrument and that has a purity of no less than 98 percent.

(iv) Establish a mass flow rate by using the following procedures:

(A) Provide a source of gas where it will be in the field of view of the optical gas imaging instrument.

(B) Set up the optical gas imaging instrument at a recorded distance from the outlet or leak orifice of the flow meter that will not be exceeded in the actual performance of the leak survey. Do not exceed the operating parameters of the flow meter.

(C) Open the valve on the flow meter to set a flow rate that will create a mass emission rate equal to the mass rate specified in paragraph (i)(2)(i) of this section while observing the gas flow through the optical gas imaging instrument viewfinder. When an image of the gas emission is seen through the viewfinder at the required emission rate, make a record of the reading on the flow meter.

(v) Repeat the procedures specified in paragraphs (i)(2)(ii) through (i)(2)(iv) of this section for each configuration of the optical gas imaging instrument used during the leak survey.

(vi) To use an alternative method to demonstrate daily instrument checks, apply to the Administrator for approval of the alternative under § 60.13(i).

(3) Leak Survey Procedure. Operate the optical gas imaging instrument to image every regulated piece of equipment selected for this work practice in accordance with the instrument manufacturer's operating parameters. All emissions imaged by the optical gas imaging instrument are considered to be leaks and are subject to repair. All emissions visible to the naked eye are also considered to be leaks and are subject to repair.

(4) Recordkeeping. You must keep the records described in paragraphs (i)(4)(i) through (i)(4)(vii) of this section:

(i) The equipment, processes, and facilities for which the owner or operator chooses to use the alternative work practice.

(ii) The detection sensitivity level selected from Table 1 to subpart A of this part for the optical gas imaging instrument.

(iii) The analysis to determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, as specified in paragraph (i)(2)(i)(A) of this section.

(iv) The technical basis for the mass fraction of detectable chemicals used in the equation in paragraph (i)(2)(i)(B) of this section.

(v) The daily instrument check. Record the distance, per paragraph (i)(2)(iv)(B) of this section, and the flow meter reading, per paragraph (i)(2)(iv)(C) of this section, at which the leak was imaged. Keep a video record of the daily instrument check for each configuration of the optical gas imaging instrument used during the leak survey (for example, the daily instrument check must be conducted for each lens used). The video record must include a time and date stamp for each daily instrument check. The video record must be kept for 5 years.

(vi) Recordkeeping requirements in the applicable subpart. A video record must be used to document the leak survey results. The video record must include a time and date stamp for each monitoring event. A video record can be used to meet the recordkeeping requirements of the applicable subparts if each piece of regulated equipment selected for this work practice can be

identified in the video record. The video record must be kept for 5 years.

(vii) The results of the annual Method 21 screening required in paragraph (h)(7) of this section. Records must be kept for all regulated equipment specified in paragraph (h)(1) of this section. Records must identify the equipment screened, the screening value measured by Method 21, the time and date of the screening, and calibration information required in the existing applicable subpart.

(5) Reporting. Submit the reports required in the applicable subpart. Submit the records of the annual Method 21 screening required in paragraph (h)(7) of this section to the Administrator via e-mail to *CCG-AWP@EPA.GOV.*

3. Subpart A is amended by adding Table 1 to subpart A to read as follows:

TABLE 1 TO SUBPART A TO PART 60–DETECTION SENSITIVITY LEVELS (GRAMS PER HOUR)

Monitoring frequency per subpart [a]	Detection sensitivity level
Bi-Monthly	60
Semi-Quarterly	85
Monthly	100

[a] When this alternative work practice is used to identify leaking equipment, the owner or operator must choose one of the monitoring frequencies listed in this table in lieu of the monitoring frequency specified in the applicable subpart. Bi-monthly means every other month. Semi-quarterly means twice per quarter. Monthly means once per month.

PART 63—[AMENDED]

■ 4. The authority citation for part 63 continues to read as follows:

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

Subpart A—[Amended]

■ 5. Section 63.11 is amended:
■ a. By revising the section heading;
■ b. By revising paragraph (a); and
■ c. By adding paragraphs (c), (d), and (e) to read as follows:

§ 63.11 Control device and work practice requirements.

(a) *Applicability.* (1) The applicability of this section is set out in § 63.1(a)(4).

(2) This section contains requirements for control devices used to comply with applicable subparts of this part. The requirements are placed here for administrative convenience and apply only to facilities covered by subparts referring to this section.

(3) This section also contains requirements for an alternative work practice used to identify leaking equipment. This alternative work practice is placed here for administrative convenience and is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

* * * * *

(c) *Alternative Work Practice for Monitoring Equipment for Leaks.* Paragraphs (c), (d), and (e) of this section apply to all equipment for which the applicable subpart requires monitoring with a 40 CFR part 60, Appendix A–7, Method 21 monitor, except for closed vent systems, equipment designated as leakless, and equipment identified in the applicable subpart as having no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. An owner or operator may use an optical gas imaging instrument instead of a 40 CFR part 60, Appendix A–7, Method 21 monitor. Requirements in the existing subparts that are specific to the Method 21 instrument do not apply under this section. All other requirements in the applicable subpart that are not addressed in paragraphs (c), (d), and (e) of this section continue to apply. For example, equipment specification requirements, and non-Method 21 instrument recordkeeping and reporting requirements in the applicable subpart continue to apply. The terms defined in paragraphs (c)(1) through (5) of this section have meanings that are specific to the alternative work practice standard in paragraphs (c), (d), and (e) of this section.

(1) *Applicable subpart* means the subpart in 40 CFR parts 60, 61, 63, and 65 that requires monitoring of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

(2) *Equipment* means pumps, valves, pressure relief valves, compressors, open-ended lines, flanges, connectors, and other equipment covered by the applicable subpart that require monitoring with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

(3) *Imaging* means making visible emissions that may otherwise be invisible to the naked eye.

(4) *Optical gas imaging instrument* means an instrument that makes visible emissions that may otherwise be invisible to the naked eye.

(5) *Repair* means that equipment is adjusted, or otherwise altered, in order to eliminate a leak.

(6) *Leak* means:

(i) Any emissions imaged by the optical gas instrument;

(ii) Indications of liquids dripping;

(iii) Indications by a sensor that a seal or barrier fluid system has failed; or

(iv) Screening results using a 40 CFR part 60, Appendix A–7, Method 21 monitor that exceed the leak definition in the applicable subpart to which the equipment is subject.

(d) The alternative work practice standard for monitoring equipment for leaks is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

(1) An owner or operator of an affected source subject to 40 CFR parts 60, 61, 63, or 65 can choose to comply with the alternative work practice requirements in paragraph (e) of this section instead of using the 40 CFR part 60, Appendix A–7, Method 21 monitor to identify leaking equipment. The owner or operator must document the equipment, process units, and facilities for which the alternative work practice will be used to identify leaks.

(2) Any leak detected when following the leak survey procedure in paragraph (e)(3) of this section must be identified for repair as required in the applicable subpart.

(3) If the alternative work practice is used to identify leaks, re-screening after an attempted repair of leaking equipment must be conducted using either the alternative work practice or the 40 CFR part 60, Appendix A–7, Method 21 monitor at the leak definition required in the applicable subparts to which the equipment is subject.

(4) The schedule for repair is as required in the applicable subpart.

(5) When this alternative work practice is used for detecting leaking equipment, choose one of the monitoring frequencies listed in Table 1 to subpart A of this part in lieu of the monitoring frequency specified for regulated equipment in the applicable subpart. Reduced monitoring frequencies for good performance are not applicable when using the alternative work practice.

(6) When this alternative work practice is used for detecting leaking equipment, the following are not applicable for the equipment being monitored:

(i) Skip period leak detection and repair;

(ii) Quality improvement plans; or

(iii) Complying with standards for allowable percentage of valves and pumps to leak.

(7) When the alternative work practice is used to detect leaking equipment, the regulated equipment in paragraph (d)(1)(i) of this section must also be

monitored annually using a 40 CFR part 60, Appendix A–7, Method 21 monitor at the leak definition required in the applicable subpart. The owner or operator may choose the specific monitoring period (for example, first quarter) to conduct the annual monitoring. Subsequent monitoring must be conducted every 12 months from the initial period. Owners or operators must keep records of the annual Method 21 screening results, as specified in paragraph (i)(4)(vii) of this section.

(e) An owner or operator of an affected source who chooses to use the alternative work practice must comply with the requirements of paragraphs (e)(1) through (e)(5) of this section.

(1) Instrument Specifications. The optical gas imaging instrument must comply with the requirements specified in paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) Provide the operator with an image of the potential leak points for each piece of equipment at both the detection sensitivity level and within the distance used in the daily instrument check described in paragraph (e)(2) of this section. The detection sensitivity level depends upon the frequency at which leak monitoring is to be performed.

(ii) Provide a date and time stamp for video records of every monitoring event.

(2) Daily Instrument Check. On a daily basis, and prior to beginning any leak monitoring work, test the optical gas imaging instrument at the mass flow rate determined in paragraph (e)(2)(i) of this section in accordance with the procedure specified in paragraphs (e)(2)(ii) through (e)(2)(iv) of this section for each camera configuration used during monitoring (for example, different lenses used), unless an alternative method to demonstrate daily instrument checks has been approved in accordance with paragraph (e)(2)(v) of this section.

(i) Calculate the mass flow rate to be used in the daily instrument check by following the procedures in paragraphs (e)(2)(i)(A) and (e)(2)(i)(B) of this section.

(A) For a specified population of equipment to be imaged by the instrument, determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, within the distance to be used in paragraph (e)(2)(iv)(B) of this section, at or below the standard detection sensitivity level.

(B) Multiply the standard detection sensitivity level, corresponding to the selected monitoring frequency in Table 1 of subpart A of this part, by the mass fraction of detectable chemicals from the stream identified in paragraph (e)(2)(i)(A) of this section to determine the mass flow rate to be used in the daily instrument check, using the following equation.

$$E_{dic} = (E_{sds}) \sum_{i=1}^{k} x_i$$

Where:

E_{dic} = Mass flow rate for the daily instrument check, grams per hour

x_i = Mass fraction of detectable chemical(s) i seen by the optical gas imaging instrument, within the distance to be used in paragraph (e)(2)(iv)(B) of this section, at or below the standard detection sensitivity level, E_{sds}.

E_{sds} = Standard detection sensitivity level from Table 1 to subpart A, grams per hour

k = Total number of detectable chemicals emitted from the leaking equipment and seen by the optical gas imaging instrument.

(ii) Start the optical gas imaging instrument according to the manufacturer's instructions, ensuring that all appropriate settings conform to the manufacturer's instructions.

(iii) Use any gas chosen by the user that can be viewed by the optical gas imaging instrument and that has a purity of no less than 98 percent.

(iv) Establish a mass flow rate by using the following procedures:

(A) Provide a source of gas where it will be in the field of view of the optical gas imaging instrument.

(B) Set up the optical gas imaging instrument at a recorded distance from the outlet or leak orifice of the flow meter that will not be exceeded in the actual performance of the leak survey. Do not exceed the operating parameters of the flow meter.

(C) Open the valve on the flow meter to set a flow rate that will create a mass emission rate equal to the mass rate calculated in paragraph (e)(2)(i) of this section while observing the gas flow through the optical gas imaging instrument viewfinder. When an image of the gas emission is seen through the viewfinder at the required emission rate, make a record of the reading on the flow meter.

(v) Repeat the procedures specified in paragraphs (e)(2)(ii) through (e)(2)(iv) of this section for each configuration of the optical gas imaging instrument used during the leak survey.

(vi) To use an alternative method to demonstrate daily instrument checks, apply to the Administrator for approval of the alternative under § 63.177 or § 63.178, whichever is applicable.

(3) Leak Survey Procedure. Operate the optical gas imaging instrument to image every regulated piece of equipment selected for this work practice in accordance with the instrument manufacturer's operating parameters. All emissions imaged by the optical gas imaging instrument are considered to be leaks and are subject to repair. All emissions visible to the naked eye are also considered to be leaks and are subject to repair.

(4) Recordkeeping. Keep the records described in paragraphs (e)(4)(i) through (e)(4)(vii) of this section:

(i) The equipment, processes, and facilities for which the owner or operator chooses to use the alternative work practice.

(ii) The detection sensitivity level selected from Table 1 to subpart A of this part for the optical gas imaging instrument.

(iii) The analysis to determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, as specified in paragraph (e)(2)(i)(A) of this section.

(iv) The technical basis for the mass fraction of detectable chemicals used in the equation in paragraph (e)(2)(i)(B) of this section.

(v) The daily instrument check. Record the distance, per paragraph (e)(2)(iv)(B) of this section, and the flow meter reading, per paragraph (e)(2)(iv)(C) of this section, at which the leak was imaged. Keep a video record of the daily instrument check for each configuration of the optical gas imaging instrument used during the leak survey (for example, the daily instrument check must be conducted for each lens used). The video record must include a time and date stamp for each daily instrument check. The video record must be kept for 5 years.

(vi) Recordkeeping requirements in the applicable subpart. A video record must be used to document the leak survey results. The video record must include a time and date stamp for each monitoring event. A video record can be used to meet the recordkeeping requirements of the applicable subparts if each piece of regulated equipment selected for this work practice can be identified in the video record. The video record must be kept for 5 years.

(vii) The results of the annual Method 21 screening required in paragraph (h)(7) of this section. Records must be kept for all regulated equipment specified in paragraph (h)(1) of this section. Records must identify the equipment screened, the screening value measured by Method 21, the time and date of the screening, and calibration information required in the existing applicable subparts.

(5) Reporting. Submit the reports required in the applicable subpart.

Submit the records of the annual Method 21 screening required in paragraph (h)(7) of this section to the Administrator via e-mail to *CCG-AWP@EPA.GOV.*

■ 6. Subpart A is amended by adding Table 1 to subpart A to read as follows:

TABLE 1 TO SUBPART A OF PART 63—DETECTION SENSITIVITY LEVELS (GRAMS PER HOUR)

Monitoring frequency per subpart [a]	Detection sensitivity level
Bi-Monthly	60
Semi-Quarterly	85
Monthly	100

[a] When this alternative work practice is used to identify leaking equipment, the owner or operator must choose one of the monitoring frequencies listed in this table, in lieu of the monitoring frequency specified in the applicable subpart. Bi-monthly means every other month. Semi-quarterly means twice per quarter. Monthly means once per month.

Subpart G—[Amended]

■ 7. Table 1A to subpart G is amended by adding a new entry in numerical order for ''§ 63.11 (c), (d), and (e)'' to read as follows:

TABLE 1A TO SUBPART G OF PART 63—APPLICABLE 40 CFR PART 63 GENERAL PROVISIONS

40 CFR part 63, subpart A, provisions applicable to subpart G						
*	*	*	*	*	*	*
§ 63.11 (c), (d), and (e)						
*	*	*	*	*	*	*

Subpart H—[Amended]

■ 8. Table 4 to subpart H is amended by adding a new entry in numerical order for ''§ 63.11 (c), (d), and (e)'' to read as follows:

TABLE 4 TO SUBPART H OF PART 63—APPLICABLE 40 CFR PART 63 GENERAL PROVISIONS

40 CFR part 63, subpart H, provisions applicable to subpart H						
*	*	*	*	*	*	*
§ 63.11 (c), (d), and (e)						
*	*	*	*	*	*	*

Subpart R—[Amended]

■ 9. Table 1 to subpart R is amended by adding a new entry in numerical order for ''§ 63.11 (c), (d), and (e)'' to read as follows:

TABLE 1 TO SUBPART R OF PART 63—GENERAL PROVISIONS APPLICABILITY TO SUBPART R

Reference					Applies to subpart R	Comment
*	*	*	*	*	*	*
§ 63.11 (c), (d), and (e)					Yes.	
*	*	*	*	*	*	*

Subpart U—[Amended]

■ 10. Table 1 to subpart U is amended by revising the entry for ''§ 63.11'' to read as follows:

TABLE 1 TO SUBPART U OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART U AFFECTED SOURCES

Reference	Applies to subpart U	Explanation
* * * * * * *		
§ 63.11	Yes	§ 63.11(b) specifies requirements for flares used to comply with provisions of this subpart. § 63.504(c) contains the requirements to conduct compliance demonstrations for flares subject to this subpart. § 63.11(c), (d), and (e) specifies requirements for an alternative work practice for equipment leaks.
* * * * * * *		

Subpart HH—[Amended]

■ 11. Table 2 to subpart HH is amended by adding a new entry in numerical order for ''§ 63.11 (c), (d), and (e)'' to read as follows:

TABLE 2 TO SUBPART HH OF PART 63—APPLICABILITY OF 40 CFR PART 63 GENERAL PROVISIONS TO SUBPART HH

General provisions reference	Applicable to subpart HH	Explanation
* * * * * * *		
§ 63.11(c), (d), and (e)	Yes.	
* * * * * * *		

Subpart GGG—[Amended]

■ 12. Table 1 to subpart GGG is amended by revising the entry for ''§ 63.11'' to read as follows:

TABLE 1 TO SUBPART GGG OF PART 63—GENERAL PROVISIONS APPLICABILITY TO SUBPART GGG

General provisions reference	Summary of requirements	Applies to subpart GGG	Comments
* * * * * * *			
§ 63.11	Control device and equipment leak work practice requirements.	Yes.	
* * * * * * *			

Subpart HHH—[Amended]

■ 13. Table 2 to the appendix to subpart HHH is amended by adding a new entry in numerical order for ''§ 63.11 (c), (d), and (e)'' to read as follows:

APPENDIX: TABLE 2 TO SUBPART HHH OF PART 63—APPLICABILITY OF 40 CFR PART 63 GENERAL PROVISIONS TO SUBPART HHH

General provisions reference	Applicable to subpart HHH	Explanation
* * * * * * *		
§ 63.11(c), (d), and (e)	Yes.	
* * * * * * *		

Subpart JJJ—[Amended]

■ 14. Table 1 to subpart JJJ is amended by revising the entry for ''§ 63.11'' to read as follows:

TABLE 1 TO SUBPART JJJ OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART JJJ AFFECTED SOURCES

Reference	Applies to Subpart JJJ	Explanation
* * *	* * *	* * * * * * *
§ 63.11	Yes	§ 63.11(b) specifies requirements for flares used to comply with provisions of this subpart. § 63.1333(e) contains the requirements to conduct compliance demonstrations for flares subject to this subpart. § 63.11(c), (d), and (e) specifies requirements for an alternative work practice for equipment leaks.
* * *	* * *	* * * * * * *

Subpart VVV—[Amended]

■ 15. Table 1 to subpart VVV is amended by adding a new entry in numerical order for ''63.11 (c), (d), and (e)'', and by revising the entry for ''§ 63.11'' to read as follows:

TABLE 1 TO SUBPART VVV OF PART 63—APPLICABILITY OF 40 CFR PART 63 GENERAL PROVISIONS TO SUBPART VVV

General provisions reference	Applicable to subpart VVV	Explanation
* * *	* * *	* * * * * * *
§ 63.11	Yes	Control device and equipment leak work practice requirements.
* * *	* * *	* * * * * * *
§ 63.11(c), (d) and (e)	Yes	Alternative work practice for equipment leaks.
* * *	* * *	* * * * * * *

Subpart EEEE—[Amended]

■ 16. Table 12 to subpart EEEE is amended by adding a new entry in numerical order for ''§ 63.11 (c), (d), and (e)'' to read as follows:

TABLE 12 TO SUBPART EEEE OF PART 63–APPLICABILITY OF GENERAL PROVISIONS TO SUBPART EEEE

Citation	Subject	Brief description	Applies to subpart EEEE
* * *	* * *	* * * * * * *	* * *
§ 63.11(c), (d), and (e)	Control and work practice requirements.	Alternative work practice for equipment leaks.	Yes.
* * *	* * *	* * * * * * *	* * *

Subpart FFFF—[Amended]

■ 17. Table 12 to subpart FFFF is amended by revising the entry for ''§ 63.11'' to read as follows:

TABLE 12 TO SUBPART FFFF OF PART 63–APPLICABILITY OF GENERAL PROVISIONS TO SUBPART FFFF

* * * * * * *

Citation	Subject	Explanation
* * * * * * *		
§ 63.11	Control device requirements for flares and work practice requirements for equipment leaks.	Yes.
* * * * * * *		

Subpart UUUU—[Amended]

■ 18. Table 10 to subpart UUUU is amended by revising the entry for ''§ 63.11'' to read as follows:

TABLE 10 TO SUBPART UUUU OF PART 63–APPLICABILITY OF GENERAL PROVISIONS TO SUBPART UUUU

* * * * * * *

Citation	Subject	Brief description	Applies to Subpart UUUU
* * * * * * *			
§ 63.11	Control and work practice requirements.	Requirements for flares and alternative work practice for equipment leaks.	Yes.
* * * * * * *			

Subpart GGGGG—[Amended]

■ 19. Table 3 to subpart GGGGG is amended by revising the entry for ''§ 63.11'' to read as follows:

TABLE 3 TO SUBPART GGGGG OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART GGGGG

* * * * * * *

Citation	Subject	Brief description	Applies to subpart GGGGG
* * * * * * *			
§ 63.11	Control and work practice requirements.	Requirements for flares and alternative work practice for equipment leaks.	Yes
* * * * * * *			

Subpart HHHHH—[Amended]

■ 20. Table 10 to subpart HHHHH is amended by revising the entry for ''§ 63.11'' to read as follows:

TABLE 10 TO SUBPART HHHHH OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART HHHHH

Citation	Subject	Explanation
* * * * * * *		
§ 63.11	Control and work practice requirements	Yes
* * * * * * *		

PART 65—[Amended]

■ 21. The authority citation for part 65 continues to read as follows:

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

Subpart A—[Amended]

■ 22. Section 65.7 is amended:
■ a. By revising the section heading;
■ b. By adding a new sentence to the end of paragraph (b); and
■ c. By adding paragraphs (e), (f), and (g) to read as follows:

§ 65.7 Monitoring, recordkeeping, and reporting waivers and alternatives, and alternative work practice for equipment leaks.

* * * * *

(b) * * * Owners and operators are also provided the option of complying with an alternative work practice for monitoring leaking equipment in § 65.7 (e), (f), and (g) rather than monitoring equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

* * * * *

(e) *Alternative work practice for monitoring equipment for leaks.* This section contains requirements for an alternative work practice used to identify leaking equipment. This alternative work practice is placed here for administrative convenience and is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor. Paragraphs (e), (f), and (g) of this section apply to all equipment for which the applicable subpart requires monitoring with a 40 CFR part 60, Appendix A–7, Method 21 monitor, except for closed vent systems, equipment designated as leakless, and equipment identified in the applicable subpart as having no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. An owner or operator may use an optical gas imaging instrument instead of a 40 CFR part 60, Appendix A–7, Method 21 monitor. Requirements in the existing subparts that are specific to the Method 21 instrument do not apply under this section. All other requirements in the applicable subpart that are not addressed in paragraphs (e), (f), and (g) of this section continue to apply. For example, equipment specification requirements, and non-Method 21 instrument recordkeeping and reporting requirements in the applicable subpart continue to apply. The terms defined in paragraphs (e)(1) through (5) of this section have meanings that are specific to the alternative work practice standard in paragraphs (e), (f), and (g) of this section.

(1) *Applicable subpart* means the subpart in 40 CFR parts 60, 61, 63, and 65 that requires monitoring of each piece of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

(2) *Equipment* means pumps, valves, pressure relief valves, compressors, open-ended lines, flanges, connectors, and other equipment covered by the applicable subpart that require monitoring with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

(3) *Imaging* means making visible emissions that may otherwise be invisible to the naked eye.

(4) *Optical gas imaging instrument* means an instrument that makes visible emissions that may otherwise be invisible to the naked eye.

(5) *Repair* means that equipment is adjusted, or otherwise altered, in order to eliminate a leak.

(6) *Leak* means:

(i) Any emissions imaged by the optical gas instrument;

(ii) Indications of liquids dripping;

(iii) Indications by a sensor that a seal or barrier fluid system has failed; or

(iv) Screening results using a 40 CFR part 60, Appendix A–7, Method 21 monitor that exceed the leak definition in the applicable subpart to which the equipment is subject.

(f) The alternative work practice standard for monitoring equipment for leaks is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

(1) An owner or operator of an affected source subject to 40 CFR parts 60, 61, 63, or 65 can choose to comply with the alternative work practice requirements in paragraph (g) of this section instead of using the 40 CFR part 60, Appendix A–7, Method 21 monitor to identify leaking equipment. The owner or operator must document the equipment, process units, and facilities for which the alternative work practice will be used to identify leaks.

(2) Any leak detected when following the leak survey procedure in paragraph (g)(3) of this section must be identified for repair as required in the applicable subpart.

(3) If the alternative work practice is used to identify leaks, re-screening after an attempted repair of leaking equipment must be conducted using either the alternative work practice or the 40 CFR part 60, Appendix A–7, Method 21 monitor at the leak definition required in the applicable subparts to which the equipment is subject.

(4) The schedule for repair is as required in the applicable subpart.

(5) When this alternative work practice is used for detecting leaking equipment, choose one of the monitoring frequencies listed in Table 3 to subpart A of this part, in lieu of the monitoring frequency specified for regulated equipment in the applicable subpart. Reduced monitoring frequencies for good performance are not applicable when using the alternative work practice.

(6) When this alternative work practice is used for detecting leaking equipment, the following are not applicable for the equipment being monitored:

(i) Skip period leak detection and repair;

(ii) Quality improvement plans; or

(iii) Complying with standards for allowable percentage of valves and pumps to leak.

(7) When the alternative work practice is used to detect leaking equipment, the regulated equipment in paragraph (f)(1)(i) of this section must also be monitored annually using a 40 CFR part 60, Appendix A–7, Method 21 monitor at the leak definition required in the applicable subpart. The owner or operator may choose the specific

monitoring period (for example, first quarter) to conduct the annual monitoring. Subsequent monitoring must be conducted every 12 months from the initial period. Owners or operators must keep records of the annual Method 21 screening results, as specified in paragraph (i)(4)(vii) of this section.

(g) An owner or operator of an affected source who chooses to use the alternative work practice must comply with the requirements of paragraphs (g)(1) through (g)(5) of this section.

(1) Instrument Specifications. The optical gas imaging instrument must comply with the requirements specified in paragraphs (g)(1)(i) and (g)(1)(ii) of this section.

(i) Provide the operator with an image of the potential leak points for each piece of equipment at both the detection sensitivity level and within the distance used in the daily instrument check described in paragraph (g)(2) of this section. The detection sensitivity level depends upon the frequency at which leak monitoring is to be performed.

(ii) Provide a date and time stamp for video records of every monitoring event.

(2) Daily instrument check. On a daily basis, and prior to beginning any leak monitoring work, test the optical gas imaging instrument at the mass flow rate determined in paragraph (g)(2)(i) of this section in accordance with the procedure specified in paragraphs (g)(2)(ii) through (g)(2)(iv) of this section for each camera configuration used during monitoring (for example, different lenses used), unless an alternative method to demonstrate daily instrument checks has been approved in accordance with paragraph (g)(2)(v) of this section.

(i) Calculate the mass flow rate to be used in the daily instrument check by following the procedures in paragraphs (g)(2)(i)(A) and (g)(2)(i)(B) of this section.

(A) For a specified population of equipment to be imaged by the instrument, determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, within the distance to be used in paragraph (g)(2)(iv)(B) of this section, at or below the standard detection sensitivity level.

(B) Multiply the standard detection sensitivity level, corresponding to the selected monitoring frequency in Table 3 of subpart A of this part, by the mass fraction of detectable chemicals from the stream identified in paragraph (g)(2)(i)(A) of this section to determine the mass flow rate to be used in the daily instrument check, using the following equation.

$$E_{dic} = (E_{sds}) \sum_{i=1}^{k} x_i$$

Where:

E_{dic} = Mass flow rate for the daily instrument check, grams per hour

x_i = Mass fraction of detectable chemical(s) i seen by the optical gas imaging instrument, within the distance to be used in paragraph (g)(2)(iv)(B) of this section, at or below the standard detection sensitivity level, E_{sds}.

E_{sds} = Standard detection sensitivity level from Table 3 to subpart A, grams per hour

k = Total number of detectable chemicals emitted from the leaking equipment and seen by the optical gas imaging instrument.

(ii) Start the optical gas imaging instrument according to the manufacturer's instructions, ensuring that all appropriate settings conform to the manufacturer's instructions.

(iii) Use any gas chosen by the user that can be viewed by the optical gas imaging instrument and that has a purity of no less than 98 percent.

(iv) Establish a mass flow rate by using the following procedures:

(A) Provide a source of gas where it will be in the field of view of the optical gas imaging instrument.

(B) Set up the optical gas imaging instrument at a recorded distance from the outlet or leak orifice of the flow meter that will not be exceeded in the actual performance of the leak survey. Do not exceed the operating parameters of the flow meter.

(C) Open the valve on the flow meter to set a flow rate that will create a mass emission rate equal to the mass rate calculated in paragraph (g)(2)(i) of this section while observing the gas flow through the optical gas imaging instrument viewfinder. When an image of the gas emission is seen through the viewfinder at the required emission rate, make a record of the reading on the flow meter.

(v) Repeat the procedures specified in paragraphs (g)(2)(ii) through (g)(2)(iv) of this section for each configuration of the optical gas imaging instrument used during the leak survey.

(vi) To use an alternative method to demonstrate daily instrument checks, apply to the Administrator for approval of the alternative under § 65.7(b).

(3) Leak survey procedure. Operate the optical gas imaging instrument to image every regulated piece of equipment selected for this work practice in accordance with the instrument manufacturer's operating parameters. All emissions imaged by the optical gas imaging instrument are considered to be leaks and are subject to repair. All emissions visible to the naked eye are also considered to be leaks and are subject to repair.

(4) Recordkeeping. Keep the records described in paragraphs (g)(4)(i) through (g)(4)(vii) of this section:

(i) The equipment, processes, and facilities for which the owner or operator chooses to use the alternative work practice.

(ii) The detection sensitivity level selected from Table 3 to subpart A of this part for the optical gas imaging instrument.

(iii) The analysis to determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, as specified in paragraph (g)(2)(i)(A) of this section.

(iv) The technical basis for the mass fraction of detectable chemicals used in the equation in paragraph (g)(2)(i)(B) of this section.

(v) The daily instrument check. Record the distance, per paragraph (g)(2)(iv)(B) of this section, and the flow meter reading, per paragraph (g)(2)(iv)(C) of this section, at which the leak was imaged. Keep a video record of the daily instrument check for each configuration of the optical gas imaging instrument used during the leak survey (for example, the daily instrument check must be conducted for each lens used). The video record must include a time and date stamp for each daily instrument check. The video record must be kept for 5 years.

(vi) Recordkeeping requirements in the applicable subpart. A video record must be used to document the leak survey results. The video record must include a time and date stamp for each monitoring event. A video record can be used to meet the recordkeeping requirements of the applicable subparts if each piece of regulated equipment selected for this work practice can be identified in the video record. The video record must be kept for 5 years.

(vii) The results of the annual Method 21 screening required in paragraph (f)(7) of this section. Records must be kept for all regulated equipment specified in paragraph (f)(1) of this section. Records must identify the equipment screened, the screening value measured by Method 21, the time and date of the screening, and calibration information required in the existing applicable subparts.

(5) Reporting. Submit the reports required in the applicable subpart. Submit the records of the annual Method 21 screening required in paragraph (f)(7) of this section to the Administrator via e-mail to *CCG-AWP@EPA.GOV.*

■ 23. Subpart A is amended by adding Table 3 to subpart A of Part 65 to read as follows:

TABLE 3 TO SUBPART A OF PART 65—DETECTION SENSITIVITY LEVELS (GRAMS PER HOUR)

Monitoring Frequency per Subpart [a]	Detection Sensitivity Level
Bi-Monthly	60
Semi-Quarterly	85
Monthly	100

[a] When this alternative work practice is used to identify leaking equipment, the owner or operator must choose one of the monitoring frequencies listed in this table, in lieu of the monitoring frequency specified in the applicable subpart. Bi-monthly means every other month. Semi-quarterly means twice per quarter. Monthly means once per month.

[FR Doc. E8–30196 Filed 12–19–08; 8:45 am]

BILLING CODE 6560–50–P