

**SUPPORTING STATEMENT  
ENVIRONMENTAL PROTECTION AGENCY  
NESHAP FOR PETROLEUM REFINERIES, CATALYTIC CRACKING UNITS,  
CATALYTIC REFORMING UNITS AND SULFUR RECOVERY UNITS  
40 CFR PART 63, SUBPART UUU  
JULY 2015**

**1. Identification of the Information Collection**

**1(a) Title of the Information collection**

“National Emission Standards for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units” (40 CFR part 63, subpart UUU). This is a revision of an existing information collection request (ICR); the OMB Control Number is 2060-0554 and the EPA tracking number is 1844.07.

**1(b) Short Characterization/Abstract**

This ICR covers information collection requirements in the final amendments to the Petroleum Refineries, Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units NESHAP (40 CFR part 63, subpart UUU).

The National Emission Standards for Hazardous Air Pollutants (NESHAP) for Petroleum Refineries, Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units (40 CFR part 63, subpart UUU) were proposed on September 11, 1998, promulgated on April 11, 2002, and amended on February 9, 2005. These regulations apply to three types of affected sources at major source petroleum refineries. The three affected sources are: the fluid catalytic cracking unit catalyst regeneration; the catalytic reforming unit catalyst regeneration; and the sulfur recovery unit. The rule also includes requirements for by-pass lines associated with the three affected sources. New facilities include those that commenced construction or reconstruction after the date of proposal.

The EPA is finalizing to amend subpart UUU to revise the operating standards for fluid catalytic cracking units and clarify the requirements for catalytic reforming units and sulfur recovery units. The potential respondents are owners or operators of any existing or new petroleum refinery facilities. There are an estimated 142 major source refinery facilities subject to the Petroleum Refineries Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Units NESHAP. Emission points affected by the final amendments to subpart UUU are fluid catalytic cracking unit catalyst regeneration, catalytic reforming catalyst regeneration, and sulfur recovery units. Significant changes include new testing requirements and more stringent operating limits for fluid catalytic cracking unit catalyst regeneration, revisions to requirements for catalytic reforming catalyst regeneration when using active purging, and the addition of an alternative emissions limit for sulfur recovery units using oxygen enriched air. Other significant changes include new electronic reporting requirements for performance test reporting and revised monitoring requirements. An overarching change to all NESHAP regulations is a change in policy with regards to emission requirements and associated monitoring, recordkeeping, and reporting during startup, shutdown, and malfunctions. These changes include new emission

limits for startup and shutdown for fluid catalytic cracking unit catalyst regeneration and sulfur recovery units

This information is being collected to assure compliance with 40 CFR part 63, subpart UUU. This ICR estimates burden for 142 major source refineries to comply with the amended provisions for fluid catalytic cracking units and sulfur recovery units.<sup>1</sup> The reduction in burden as a result of electronic reporting is included in this ICR. The burden associated with startups, shutdowns, and malfunctions did not change.

## **2. Need for and Use of the Collection**

### **2(a) Need/Authority for the Collection**

The EPA is charged under section 112 of the Clean Air Act, as amended, to establish standards of performance for each category or subcategory of major sources and area sources of hazardous air pollutants. These standards are applicable to new or existing sources of hazardous air pollutants and shall require the maximum degree of emission reduction. Section 112 also requires that the Administrator review and, if appropriate, revise such standards every 8 years. In addition, section 114(a) states that the Administrator may require any owner/operator subject to any requirement of this Act to:

(A) Establish and maintain such records; (B) make such reports; (C) install, use, and maintain such monitoring equipment, and use such audit procedures, or methods; (D) sample such emissions (in accordance with such procedures or methods, at such locations, at such intervals, during such periods, and in such manner as the Administrator shall prescribe); (E) keep records on control equipment parameters, production variables or other indirect data when direct monitoring of emissions is impractical; (F) submit compliance certifications in accordance with Section 114(a)(3); and (G) provide such other information as the Administrator may reasonably require.

Certain records and reports are necessary for the Administrator to confirm the compliance status of sources subject to NESHAP, identify any new or reconstructed sources subject to the standards, and confirm that the standards are being achieved on a continuous basis. These recordkeeping and reporting requirements are specifically authorized by section 114 of the Clean Air Act (42 U.S.C. 7414) and set out in the part 63 NESHAP General Provisions. The recordkeeping and reporting requirements for title V permits are contained in 40 CFR 70.6 and 40 CFR 71.6. Under parts 63 and 70 or 71, the owner or operator must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

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<sup>1</sup> The previous ICR for this subpart (EPA ICR Number 1844.04, OMB Control Number 2060-0554) included estimates of the monitoring, recordkeeping, and reporting burden for less than 1 refinery. No new or reconstructed facilities were expected over those 3 years. However, it was estimated that three affected emission source units had qualified for a compliance date extension and would be complying with the initial compliance requirements during the period of that ICR (one per year); and one affected facility (0.33 per year) would conduct a performance test due to a process/operating change.

## **2(b) Practical Utility/Users of the Data**

The information will be used by the delegated authority (State agency, or Regional Administrator if there is no delegated State agency) to ensure that the standards and other requirements are being achieved. Based on review of the recorded information at the site and the reported information, the delegated permitting authority can identify facilities that may not be in compliance and decide which facilities, records, or processes may need inspection.

## **3. Non-duplication, Consultations, and Other Collection Criteria**

The requested recordkeeping and reporting are required under 40 CFR part 63, subpart UUU.

### **3(a) Non-duplication**

For notifications and reporting not required to be submitted electronically, if the subject standards have not been delegated, the information is sent directly to the appropriate EPA regional office. Otherwise, the information is sent directly to the delegated state or local agency. If a state or local agency has adopted its own similar standards to implement the Federal standards, a copy of the report submitted to the state or local agency can be sent to the Administrator in lieu of the report required by the Federal standards. Therefore, no duplication exists.

### **3(b) Public Notice Required Prior to ICR Submission to OMB**

This section is not applicable because this is a rule-related ICR.

### **3(c) Consultations**

The final amendments are based upon the data provided by each individual refinery in response to an EPA survey of the petroleum refinery industry in 2011 (data from calendar year 2010) which were compiled into a Petroleum Refinery Database. The final amendments were also developed in consultation with trade associations, including Matt Todd of the American Petroleum Institute (API) and David Freidman of the American Fuel and Petrochemical Manufacturers (AFPM). The assumptions made in the development of this ICR, including the estimate of the number of petroleum refineries subject to the standard, were updated by reviewing the EPA's Petroleum Refinery Database, as well as the Agency's internal data sources, such as our own industry experts and the Air Facility System (AFS), which is the EPA database for the collection, maintenance, and retrieval of all compliance data. The information in AFS is reported by industry as required in the recordkeeping and reporting provisions of the standard. AFS is operated and maintained by the EPA Office of Compliance. We have estimated that there are approximately 142 existing respondents subject to the standard, and no new sources will become subject to the standard over the 3-year period covered by this ICR.

The EPA also provided a 60-day public comment period after proposal of the amendments to subpart UUU. All affected parties were given the opportunity to comment on the proposed amendments during this period. The EPA considered all of the comments received and incorporated them, as appropriate, in developing the final amendments.

### **3(d) Effects of Less Frequent Collection**

If the relevant information were collected less frequently, the delegated permitting authority (State or EPA) will not be reasonably assured that a facility is in compliance with the standards.

### **3(e) General Guidelines**

None of the guidelines in 5 CFR 1320.5 are being exceeded.

### **3(f) Confidentiality**

All information submitted to the Agency for which a claim of confidentiality is made will be safeguarded according to the Agency policies set forth in title 40, chapter 1, part 2, subpart B - Confidentiality of Business Information (CBI) (see 40 CFR 2; 41 FR 36902, September 1, 1976; amended by 43 FR 39999, September 8, 1978; 43 FR 42251, September 28, 1978; 44 FR 17674, March 23, 1979).

### **3(g) Sensitive Questions**

This section is not applicable because this ICR does not involve matters of a sensitive nature.

## **4. The Respondents and the Information Requested**

### **4(a) Respondents/NAICS Codes**

The potential respondents to the recordkeeping and reporting requirements under subpart UUU are owners or operators of existing or new major source petroleum refineries. The North American Industry Classification System (NAICS) code is 32411 for petroleum refineries that operate catalytic cracking units, catalytic reforming units, or sulfur recovery units.

### **4(b) Information Requested**

#### **(i) Data Items**

In this ICR, all the data that is recorded or reported is required by the final amendments to NESHAP for Petroleum Refineries, Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units (40 CFR part 63, subpart UUU).

A source must make the following reports:

<b>Notification Reports</b>	
Notification of performance tests	63.7(a) and 63.9(e), 63.1574(a)(3)
Operation, maintenance, and monitoring plan	63.1574(f)

<b>Reports</b>	
Semiannual compliance reports	63.10(e)(3), 63.1575(c), (g)
Performance test reports– electronic reporting	63.1571(a)(5) and (6), 63.1575(f), (k)

A source must keep the following records:

<b>Recordkeeping</b>	
Maintain malfunction records	63.1576(a)(2)
Operation, maintenance, and monitoring plan	63.1576(e)
Emissions data	63.1576(a)(3), 63.1576(d), 63.10(d)
Monitoring data	63.1576(d)

Electronic Reporting. We are finalizing electronic reporting of performance test reports and CEMS performance evaluation data. Electronic reporting is common in environmental data collection, provides standardization of data reporting formats, and reduces reporting burden for the regulated community.

(ii) Respondent Activities

The respondent activities that will be required by the final amendments to subpart UUU include the following activities:

<b>Respondent Activities</b>
Read instructions.
Install, calibrate, maintain, and operate CMS or emission monitoring for catalytic cracking units, catalytic reforming units, and sulfur recovery systems.
Perform performance test for fluid catalytic cracking unit catalyst regeneration every 5 years or more frequently, Reference Method 5, 5B or 5F (of appendix A to 40 CFR Part 60) test for PM, and repeat performance tests if necessary.
Perform performance test for catalytic cracking unit catalyst regeneration one time, Reference Method 320 (of appendix A to 40 CFR Part 63) test for HCN.
Write the performance test notifications.
Revise the operating, maintenance, and monitoring plan.
Submit the required reports developing, acquiring, installing, and utilizing technology and systems for the purpose of collecting, validating, and verifying information.

## 5. The Information Collected: Agency Activities, Collection Methodology, and Information Management

### 5(a) Agency Activities

The EPA conducts the following activities in connection with the acquisition, analysis, storage, and distribution of the required information.

<b>Agency Activities</b>
Review notifications and reports, including performance test reports every 5 years or more frequently for catalytic cracking unit catalyst regeneration, required to be submitted by industry.
Audit facility records.
Input, analyze, and maintain data in the Air Facility System (AFS).

### 5(b) Collection Methodology and Management

Performance test reports are used by the Agency to discern a source's capability to comply with the emission standard. Data and records maintained by the respondents are tabulated and published for use in compliance and enforcement programs. The semiannual compliance reports are used for problem identification, as a check on source operation and maintenance, and for compliance determinations.

Some of the information contained in the reports is entered into AFS, which is operated and maintained by the EPA's Office of Compliance and Enforcement. AFS is the EPA's database for the collection, maintenance, and retrieval of compliance and annual emission inventory data for over 100,000 industrial and government-owned facilities. The data entered into AFS is focused on compliance inspections, enforcement actions, and issuance of permits. The EPA uses the AFS for tracking air pollution compliance and enforcement by local and state regulatory agencies, EPA regional offices and EPA headquarters. The EPA and its delegated authorities can edit, store, retrieve and analyze the data.

As part of the final revisions to this rule, all data that are required to be reported electronically will be collected through the EPA's Compliance and Emissions Data Reporting Interface (CEDRI), which is part of the EPA's Central Data Exchange. The data collected via CEDRI will be more extensive than the data collected through AFS and will be visible to the public through WebFIRE.

The records required by this regulation must be retained by the owner or operator for 5 years.

### 5(c) Small Entity Flexibility

A majority of the respondents are large entities (*i.e.*, large businesses). However, the impact on small entities (*i.e.*, small businesses) was taken into consideration during the

development of the regulation. A small entity for petroleum refineries is defined as a firm having no more than 1,500 employees. The final amendments would not result in any adverse impacts on a substantial number of small entities in the Petroleum Refining Source Category. The final amendments would not create any new requirements or burdens for existing sources other than minimal notification requirements, and for some facilities, performance testing requirements.

#### **5(d) Collection Schedule**

The specific frequency for each information collection activity within this request is shown below in Table 1: Annual Respondent Burden and Cost: Final Amendments to NESHAP for Petroleum Refineries, Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units (40 CFR Part 63, Subpart UUU).

### **6. Estimating the Burden and Cost of the Collection**

Table 1 documents the computation of individual burdens for the final recordkeeping and reporting requirements applicable to the industry for each of the subparts included in this ICR. The individual burdens are expressed under standardized headings believed to be consistent with the concept of burden under the Paperwork Reduction Act. Where appropriate, specific tasks and major assumptions have been identified. Responses to this information collection are mandatory.

The 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.

#### **6(a) Estimating Respondent Burden**

The average annual burden to industry over the next 3 years from these recordkeeping and reporting requirements is estimated to be 4,940 (Total Labor Hours from Table 1). The recordkeeping hours shown below in Table 1 are 23. The reporting requirement hours shown below in Table 1 are 4,914. These hours are based on Agency studies and background documents from the development of the regulation and Agency knowledge and experience with the NESHAP program. The average annual burden over the next 3 years was estimated assuming one-third of all facilities would comply each year.

#### **6(b) Estimating Respondent Costs**

##### **(i) Estimating Labor Costs**

This ICR uses the following labor rates:

Managerial	\$130.26	(\$62.03 + 110%)
Technical	\$84.95	(\$40.45 + 110%)
Clerical	\$41.18	(\$19.61 + 110%)

Labor rates and associated costs are based on the Bureau of Labor Statistics (BLS) data. Technical, management, and clerical average hourly rates for private industry workers were taken from the Occupational Employment Statistics: NAICS 324 (Petroleum and Coal Products Manufacturing), May 2009 Employment and Wage Estimates. These BLS rates represent salaries

plus fringe benefits and do not include the cost of overhead. The rates have been increased by 110 percent to account for the benefit packages available to those employed by private industry.

(ii) Estimating Capital and Operation and Maintenance Costs

The type of industry costs associated with the information collection activities in the subject standards are both labor costs which are addressed elsewhere in this ICR and the costs associated with continuous monitoring.

The capital costs are one-time costs for a facility subject to the regulation. There are no capital costs associated with the information collection requirements of the final amendments to subpart UUU.

An annual operation and maintenance cost for this subpart includes performance testing. The final amendments do require an estimated 101 facilities to conduct periodic performance testing for particulate matter every 5 years for catalytic cracking unit catalyst regeneration, unless the particulate matter emissions measured during the most recent performance test are in excess of 0.8 g/kg coke burn-off when using the fixed 20 percent opacity operating limit compliance alternative, in which case the testing frequency will be annually. Additionally, a one-time performance test for HCN is required for catalytic cracking unit catalyst regeneration as part of the final amendments. There are 116 catalytic cracking units. In the 3 years following promulgation, the estimated cost for particulate matter performance testing is an average of \$391,307 per year (\$9,200 per unit for EPA Method 5 performance test  $\times$  116 units  $\times$  1.1 / 3 years = \$391,307/yr).<sup>2</sup> In the 3 years following promulgation, the estimated cost for the one-time HCN test is an average of \$386,667 per year (\$10,000 per FCCU for EPA Method 320 performance test  $\times$  116 FCCUs / 3 years = \$386,667/yr).

There are also labor costs associated with performing a one-time engineering evaluation and personnel training relative to the catalytic reforming unit operational requirements in the final rule. The rule requirements are subject only to units using active purge, and we expect this to be approximately 10-percent of the 151 total units at all refineries (i.e., 15 units).

(iii) Annualizing Capital Costs

There are no annualized capital costs associated with the information collection requirements of the final amendments.

**6(c) Estimating Agency Burden and Cost**

The only costs to the Agency are those costs associated with analysis of the reported information. The EPA compliance and enforcement program includes activities such as: the

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<sup>2</sup> The final rule requires FCCU to conduct EPA Reference Method (M5) PM testing every 5 years, unless the "NSPS J" compliance option is used and the PM emissions rate during the most recent test is greater than 0.8 g PM/kg coke burn-off. For facilities in excess of that rate, testing will be required annually. It was assumed that approximately 10% of sources will require annual testing. Therefore, the number of units was multiplied by 1.1 to account for annual testing of some units.



review examination of records maintained by the respondents; periodic inspection of sources of emissions; and the publication and distribution of collected information.

The average annual Agency cost during the 3 years of the ICR is estimated to be \$11,728 (see Table 2 below.)

This cost is based on the average hourly labor rate as follows:

Managerial	\$61.36	(GS-13, Step 5, \$38.35 + 60%)
Technical	\$45.52	(GS-12, Step 1, \$28.45 + 60%)
Clerical	\$24.64	(GS-6, Step 3, \$15.40 + 60%)

These rates are from the Office of Personnel Management (OPM) 2009 General Schedule, which excludes locality rates of pay. The rates have been increased by 60 percent to account for the benefit packages available to government employees.

#### **6(d) Estimating the Respondent Universe and Total Burden and Costs**

There are currently 142 major source refineries in the United States and no new refineries are expected to be built during the next 3-year period. It is estimated that no additional respondents per year will become subject to the standard. The overall average number of respondents per year subject to this standard is calculated using the following table that addresses the 3 years covered by this ICR.

<b>Number of Respondents</b>					
	Respondents That Submit Reports		Respondents That Do Not Submit Any Reports		
Year	(A) Number of New Respondents <sup>a</sup>	(B) Number of Existing Respondents	(C) Number of Existing Respondents that keep records but do not submit reports	(D) Number of Existing Respondents That Are Also New Respondents	(E) Number of Respondents (E=A+B+C-D)
1	0	47.3	0	0	47.3
2	0	94.7	0	0	94.7
3	0	142	0	0	142
Average	0	94.7	0	0	94.7

<sup>a</sup> New respondents include sources with constructed, reconstructed, and modified affected facilities.

Column D is subtracted to avoid double-counting respondents. As shown above, the average Number of Respondents over the 3-year period of this ICR is 94.7.

The total number of annual responses per year is calculated using the following table:

<b>Total Annual Responses</b>				
(A) Information Collection Activity	(B) Number of Respondents	(C) Number of Responses	(D) Number of Existing Respondents That Keep Records But Do Not Submit Reports	(E) Total Annual Responses E=(B×C)+D
Notification of particulate matter performance test	37.0 <sup>a</sup>	1.15 <sup>c</sup>	0	42.6
Notification of HCN performance test	33.7 <sup>b</sup>	1.15 <sup>c</sup>	0	38.8
Operation, maintenance, and monitoring plan	33.7 <sup>d</sup>	1	0	33.7
Particulate matter performance test reports	37.0 <sup>a</sup>	1.15 <sup>c</sup>	0	42.6
HCN performance test reports	33.7 <sup>b</sup>	1.15 <sup>c</sup>	0	38.8
Engineering evaluation and training for catalytic reforming unit operational requirements	5.0 <sup>e</sup>	1	0	5.0
			Total	201.5

<sup>a</sup> There are 101 facilities with catalytic cracking units conducting a performance test once every 5 years. In the 3 years following promulgation, 101 facilities will test their catalytic cracking unit catalyst regeneration. Additionally, it was assumed 10 percent of the respondents would be required to test annually for a total of 37.1 respondents annually *i.e.*,  $101 \times 1.1 / 3 \text{ years} = 37.0 \text{ facilities/year}$  that respond.

<sup>b</sup> There are 101 facilities with catalytic cracking units conducting a one-time performance test. In the 3 years following promulgation, 101 facilities will test their catalytic cracking unit catalyst regeneration, so there are 33.7 respondents per year, *i.e.*,  $101 \text{ facilities} / 3 \text{ years} = 33.7 \text{ facilities/year}$  that respond.

<sup>c</sup> There are approximately 116 catalytic cracking units at 101 facilities, so each facility would report 1.15 responses per year, *i.e.*,  $116 \text{ units} / 101 \text{ facilities} = 1.15 \text{ responses/facility}$ .

<sup>d</sup> Assumed 101 facilities must revise the operation, maintenance, and monitoring (OMM) Plan due to monitoring requirement changes for catalytic cracking unit catalyst; we assumed that one-third of facilities comply in each of the 3 years following promulgation, so that 33.7 facilities will revise the plan each year.

<sup>e</sup> The rule requirements are subject only to units using active purge, and we expect this to be approximately 10 percent of the 151 total units at all refineries (*i.e.*,  $15.1 \text{ units} / 3 \text{ years} = 5.0 \text{ respondents/year}$ ).

The number of Total Annual Responses is 202 (rounded) (81.2 annual responses for the notification of performance test, 33.7 annual responses for the operation, maintenance, and monitoring plan, 81.2 annual responses for the performance test reports) and 5.0 for catalytic reforming unit engineering evaluation and training. The total annual labor costs are \$410,000 (rounded). Details regarding these estimates may be found below in Table 1: Annual Respondent Burden and Cost: Final Amendments to NESHAP for Petroleum Refineries, Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units (40 CFR Part 63, Subpart UUU) .

### **6(e) Bottom Line Burden Hours Burden Hours and Cost Tables**

The detailed bottom line burden hours and cost calculations for the respondents and the Agency are shown in Tables 1 and 2, respectively, and summarized below.

(i) Respondent Tally

The bottom line respondent burden hours and costs, presented in Table 1, are calculated by adding person-hours per year down each column for technical, managerial, and clerical staff, and by adding down the cost column. The average annual burden for the recordkeeping and reporting requirements in the final amendments to subpart UUU for the 142 major source facilities that are subject is 4,940 person-hours, with an annual average cost of \$410,328. Details regarding these estimates may be found below in Table 1: Annual Respondent Burden and Cost: Final Amendments to NESHAP for Petroleum Refineries, Catalytic Cracking, Reforming and Sulfur Units (40 CFR Part 63, Subpart UUU).

There are no annual capital costs associated with the final amendments; the operation and maintenance costs associated with the final amendments include performance testing costs for the regulated entity of \$777,973 per year. The cost calculations are detailed in Section 6(b)(ii), Capital vs. Operation and Maintenance (O&M) Costs.

(ii) The Agency Tally

The average annual Agency burden and cost over next 3 years is estimated to be 264 labor hours (rounded) at a cost of \$11,700 (rounded). See below Table 2: Annual Agency Burden and Cost: Final Amendments to NESHAP for Petroleum Refineries, Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units (40 CFR Part 63, Subpart UUU) .

**6(f) Reasons for Change in Burden**

The change in burden estimate reflects the additional requirements of the final amendments to 40 CFR part 63, subpart UUU.

**6(g) Burden Statement**

The average annual respondent burden for the final amendments for subpart UUU is estimated at 4,940 hours. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB Control Number. The OMB Control Numbers for EPA regulations are listed at 40 CFR part 9 and 48 CFR chapter 15.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, the EPA has established a public docket for this ICR under Docket ID Number EPA-HQ-OAR-2010-0682, which is available for on-line viewing at

[www.regulations.gov](http://www.regulations.gov), or in person viewing at the Air and Radiation Docket and Information Center in the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Avenue, NW, Washington, D.C. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket and Information Center is (202) 566-1742. An electronic version of the public docket is available at [www.regulations.gov](http://www.regulations.gov). This site can be used to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. When in the system, select “search,” then key in the Docket ID Number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, D.C. 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID Number EPA-HQ-OAR-2010-0682 in any correspondence.

### **Part B of the Supporting Statement**

This part is not applicable because no statistical methods were used in collecting this information.

**Table 1. Annual Respondent Burden and Cost: Final Amendments to NESHAP for Petroleum Refineries, Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units (40 CFR Part 63, Subpart UUU)**

Burden item	(A) Person-hours per occurrence	(B) No. of occurrences per respondent per year	(C) Person-hours per respondent per year (C=A×B)	(D) Respondents per year <sup>a</sup>	(E) Technical person-hours per year (E=C×D)	(F) Management person-hours per year (E×0.05)	(G) Clerical person-hours per year (E×0.1)	(H) Cost,\$ <sup>b</sup>
1. Applications	N/A							
2. Survey and Studies	N/A							
3. Acquisition, Installation, and Utilization of Technology and Systems	40	1	40	0	0	0	0	\$0
4. Reporting Requirements								
A. Read instructions <sup>c</sup>	2	1	2	94.7	189.3	9.5	18.9	\$18,096
B. Required activities								
Initial Performance test <sup>d</sup>	40	1	40	0	0	0	0	\$0
PM Performance test (internal) <sup>e</sup>	40	1	40	42.5	1701.3	85.1	170.1	\$162,607
HCN Performance test (internal) <sup>f</sup>	40	1	40	38.7	1546.7	77.3	154.7	\$147,825
Operating, maintenance, and monitoring plan <sup>g</sup>	20	1	20	33.7	673.3	33.7	67.3	\$64,355
C. Create information	See 4B							
D. Gather existing information	See 4B							
E. Write report								
Notification of construction/reconstruction <sup>d</sup>	2	1	2	0	0	0	0	\$0
Notification of actual startup <sup>d</sup>	2	1	2	0	0	0	0	\$0
Notification of special compliance requirements	N/A							
Notification of PM performance test <sup>e</sup>	2	1	2	42.5	85.1	4.3	8.5	\$8,130
Notification of HCN performance test <sup>f</sup>	2	1	2	38.7	77.3	3.9	7.7	\$7,391
Notification of compliance Status <sup>d</sup>	4	1	4	0	0	0	0	\$0
Extended compliance request	N/A							
Report of performance test	See 4B							

Burden item	(A) Person- hours per occurrence	(B) No. of occurrences per respondent per year	(C) Person- hours per respondent per year (C=A×B)	(D) Respondents per year <sup>a</sup>	(E) Technical person- hours per year (E=C×D)	(F) Management person-hours per year (E×0.05)	(G) Clerical person- hours per year (E×0.1)	(H) Cost,\$ <sup>b</sup>
Semiannual compliance reports <sup>h</sup>	10.0	2	20.0	0	0	0	0	\$0
Annual report	0	0	0.0	0	0	0	0	\$0
5. Recordkeeping Requirements								
A. Read instructions	See 4A							
B. Plan activities	See 4B							
C. Implement activities	See 4B							
D. Develop record system <sup>d</sup>	N/A							
E. Time to enter information								
Records of operations <sup>i</sup>	1	52	52	0	0	0	0	\$0
F. Time to train personnel <sup>j</sup>	4	1	4	5.0	20	1.0	2.0	\$1,924
G. Time to adjust existing ways to comply with previously applicable requirements <sup>d</sup>	N/A							
H. Time to transmit or disclose Information <sup>k</sup>	0.25	2	0.5	0	0	0.0	0.0	\$0
I. Time for audits	N/A							
Subtotal Labor Burden					4,293	215	429	\$410,328
					4,940			
TOTAL ANNUAL NUMBER OF RESPONSES								201
ANNUAL CAPITAL COSTS								NA
PM Performance Tests (outsourced) <sup>l</sup>								\$391,307
HCN Performance Tests (outsourced) <sup>m</sup>								\$386,667
OPERATION AND MAINTENANCE COSTS								NA
TOTAL LABOR BURDEN AND COST								\$1,188,301

**Assumptions:**

<sup>a</sup> We have determined that there are 142 major petroleum refineries that have one or more affected facilities subject to the standard. No new or reconstructed facilities are expected over the next 3 years. We assumed that approximately one-third of facilities would comply with the amended rule in each of the 3 years following promulgation, so that 47.3 facilities would comply and be subject the first year, 94.7 facilities would be subject the second year, and 142 facilities would be subject the third year. We assumed costs based on the second year, with 94.7 facilities subject to the rule.

<sup>b</sup> This ICR uses the following labor rates: \$130.26 per hour for Executive, Administrative, and Managerial labor; \$84.95 per hour for Technical labor, and \$41.18 per hour for Clerical labor. These rates are from the United States Department of Labor, Bureau of Labor Statistics, May 2009. The rates are from column 1, "Total compensation." The rates have been increased by 110 percent to account for the benefit packages available to those employed by private industry.

<sup>c</sup> Assumed 142 facilities have to read the amended UUU rule. Assumed costs based on the second year, with 94.7 facilities subject to the rule.

<sup>d</sup> Assumed that this activity has already occurred for existing sources.

<sup>e</sup> The final rule requires catalytic cracking unit catalyst regeneration to conduct EPA Reference Method (M5) PM testing every 5 years, unless the unit is subject to the "NSPS J" compliance option and the PM emissions rate during the most recent test is greater than 0.8 g PM/kg coke burn-off. For units in excess of that rate, testing is required annually. It was assumed that 10 percent of sources will require annual testing. There are 116 FCCUs that will test over the 3 years after promulgation, so each year, approximately 42.5 performance tests will be conducted ( $116 \text{ units} \times 1.1 / 3 \text{ years} = 42.5 \text{ tests/year}$ ).

<sup>f</sup> The final rule requires each catalytic cracking unit to conduct a one-time EPA Reference Method 320 test for HCN. There are 116 units that will test over the 3 years after promulgation, so each year, approximately 38.7 performance tests will be conducted ( $116 \text{ units} / 3 \text{ years} = 38.7 \text{ tests/year}$ ).

<sup>g</sup> Assumed approximately 101 facilities must revise the OMM Plan due to monitoring requirement changes for catalytic cracking unit catalyst regeneration; we assumed that one-third of facilities comply in each of the 3 years following promulgation, so that 33.7 facilities will revise the plan each year. Assumed 20 hr to revise the OMM Plan.

<sup>h</sup> Assumed all facilities submit semiannual compliance reports, however, this requirement is already in the rule and no changes to this requirement are made in the current rule action.

<sup>i</sup> Assumed it requires facilities 1 hour to record data per week (52 weeks), and all facilities would record; however this requirement is already in the rule and no changes to this requirement are made in the current rule action.

<sup>j</sup> These costs reflect the one-time engineering evaluation and personnel training costs relative to the catalytic reforming unit catalyst regeneration operational changes made in the final rule. Assumed the training is needed for 10 percent of the catalytic reforming units. There are 151 catalytic reforming units and we assumed one-third of the facilities conduct training for their units each year, so training takes place at 5.0 units per year (i.e.,  $151 \times 0.1 / 3$ ). Other costs associated with the one-time annual training that all facilities would conduct which is already required by the rule and is being unchanged by the final amendments is not included in this burden estimate.

<sup>k</sup> Assumed it requires facilities 15 minutes to transmit information semiannually and that all facilities would submit each year; however, this requirement is already in the rule and no changes to this requirement are made in the current rule action.

<sup>l</sup> Assumed that an EPA Reference Method 5 performance test would cost approximately \$9,200, and 42.5 performance tests would be conducted each year in the 3 years following promulgation. The final rule requires resting of PM from catalytic cracking unit catalyst regeneration using EPA Reference Method 5 once every 5 years, unless unit is subject to the "NSPS J" compliance option and the PM emissions rate during the most recent test is greater than 0.8 g PM/kg coke burn-off. For units in excess of that rate, testing is required annually. Assumed 10% of sources will require annual testing. There are 116 units that will test over the 3 years after promulgation, so each year, approximately 42.5 tests will be conducted each year ( $116 \times 1.1 / 3$ ).

<sup>m</sup> Assumed that an EPA Reference Method 320 performance test would cost approximately \$10,000, and 38.7 performance tests would be conducted each year in the 3 years following promulgation ( $116 \text{ units} / 3 \text{ years} = 38.7 \text{ units/year}$ ).

**Table 2. Annual Burden and Cost to the Federal/State Government: Final Amendments to NESHAP for Petroleum Refineries, Catalytic Cracking, Reforming and Sulfur Units (40 CFR Part 63, Subpart UUU)**

Activity	(A) Hours per occurrence	(B) Hours per plant per year	(C) Plants per year	(D) Technical person-hours per year (E=B×C)	(E) Management person-hours per year (D×0.05)	(F) Clerical person- hours per year (D×0.1)	(G) Cost,\$ <sup>a</sup>
Report Review							
Notification of construction/reconstruction	N/A						
Notification of actual startup	N/A						
Notification of special compliance requirements	N/A						
Notification of initial performance test <sup>b</sup>	NA						
Notification of PM performance test <sup>c</sup>	2	2	42.5	85.1	4.3	8.5	\$4,343
Notification of HCN performance test <sup>d</sup>	2	2	38.7	77.3	3.9	7.7	\$3,948
Notification of compliance status	2	2	0	0.0	0.0	0.0	\$0
Review of operation, maintenance, and monitoring plan <sup>e</sup>	2	2	33.7	67.3	3.4	6.7	\$3,438
Review of repeat performance test report	8	8	0	0.0	0.0	0.0	\$0
Review of compliance report	N/A						
Review of semiannual compliance reports <sup>f</sup>	2	4	0	0.0	0.0	0.0	\$0
Review of NESHAP waiver application	4	4	0	0.0	0.0	0.0	\$0
Subtotal Labor Burden				230	11	23	\$11,728
<b>TOTAL LABOR BURDEN AND COST</b>					264		\$11,728

**Assumptions:**

<sup>a</sup> This ICR uses the following labor rates: Managerial rate of \$61.36 per hour (GS-13, Step 5, \$38.35 + 60%); Technical rate of \$45.52 per hour (GS-12, Step 1, \$28.45 + 60%); and Clerical rate of \$24.64 per hour (GS-6, Step 3, \$15.40 + 60%). These rates are from the Office of Personnel Management (OPM) 2009 General Schedule, which excludes locality rates of pay.

<sup>b</sup> Assumed that this activity has already occurred for existing sources.

<sup>c</sup> The final rule requires PM testing of catalytic cracking unit catalyst regeneration using EPA Reference Method 5 once every 5 years, unless the unit is subject to the “NSPS J” compliance option and the PM emissions rate during the most recent test is greater than 0.8 g PM/kg coke burn-off. For facilities in excess of that rate, testing is required annually. Assumed 10 percent of sources will require annual testing. There are 116 units that will test over the 3 years after promulgation, so each year, approximately 42.5 tests will be conducted each year (116 × 1.1 / 3).

<sup>d</sup> The final rule requires a one-time HCN performance test for each catalytic cracking unit using EPA Reference Method 320. There are 116 units that will test over the 3 years after promulgation, so each year, approximately 38.7 performance tests will be conducted (116 units / 3 years = 38.7 tests/year).



<sup>e</sup> Assumed approximately 101 facilities must revise the OMM Plan due to monitoring requirement changes for FCCUs (there are 116 FCCUs at 101 facilities in the source category); we assumed that one-third of facilities comply in each of the 3 years following promulgation, so that 33.7 facilities will revise the plan each year. Assumed 2 hours for review of the OMM Plan.

<sup>f</sup> We have determined that there are 142 major petroleum refineries that have one or more affected facilities subject to the standard. No new or reconstructed facilities are expected over the next 3 years. For the current burden estimate, however, we note that this requirement is already in the rule and no changes to this requirement are made in the current rule action.