

**SUPPORTING STATEMENT  
ENVIRONMENTAL PROTECTION AGENCY**

**NSPS for Petroleum Refineries for which Construction, Reconstruction, or Modification  
Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja) (Renewal)**

**1. Identification of the Information Collection**

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

NSPS for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja) (Renewal), EPA ICR Number 2263.07, OMB Control Number 2060-0602.

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

The New Source Performance Standards (NSPS) for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja) were proposed on May 14, 2007; promulgated on June 24, 2008; and amended most-recently on November 26, 2018, at 83 FR 60696<sup>1</sup>. The provisions of Subpart Ja apply to the following affected facilities in petroleum refineries: fluid catalytic cracking units (FCCU), fluid coking units (FCU), delayed coking units, fuel gas combustion devices (FGCD), process heaters, flares and sulfur recovery plants. Except for flares, these regulations apply to affected facilities at both existing and new petroleum refineries that are either constructed, or reconstructed, or modified after May 14, 2007. The provisions of this subpart apply to flares which either commence construction, or modification, or reconstruction after June 24, 2008. New facilities include those that either commenced construction, or modification, or reconstruction after the date of proposal. This information is being collected to assure compliance with 40 CFR Part 60, Subpart Ja.

In general, all NSPS standards require initial notifications, performance tests, and periodic reports by the owners/operators of the affected facilities. They are also required to maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility, or any period during which the monitoring system is inoperative. These notifications, reports, and records are essential in determining compliance, and are required of all affected facilities subject to NSPS.

Any owner/operator subject to the provisions of this part shall maintain a file of these measurements and retain the file for at least two years following the date of such measurements, maintenance reports, and records. All reports required to be submitted electronically are submitted through the EPA's Central Data Exchange (CDX), using the Compliance and Emissions Data Reporting Interface (CEDRI), where the delegated state or local authority can review them. If there is no such delegated authority, the EPA's regional offices can review

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<sup>1</sup> The rule was amended on November 26, 2018 at 83 FR 60696 to: clarify the requirements; make technical corrections and minor revisions to requirements for work practice standards, recordkeeping, and reporting; and also to finalize amendments to the compliance date of the requirements for existing maintenance vents. The amended regulations did not result in an increase in burden.

them. All other reports are sent to the delegated state or local authority. If there is no such delegated authority, the reports are sent directly to the EPA's regional offices. The use of the term "Designated Administrator" throughout this document refers to the U.S. EPA or a delegated authority such as a state agency. The term "Administrator" alone refers to the U.S. EPA Administrator.

There are approximately 129 petroleum refineries, which are owned and operated by the petroleum refining industry (aka: the "Affected Public"). None of the 129 petroleum refineries in the United States are owned by either state, local, or tribal entities or the Federal government. They are all privately-owned, for-profit businesses. The 'burden' to the Affected Public may be found below in Table 1: Annual Respondent Burden and Cost – NSPS for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja) (Renewal). The Federal Government's 'burden' is attributed entirely to work performed by either Federal employees or government contractors and may be found below in Table 2: Average Annual EPA Burden and Cost – NSPS for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja) (Renewal). We assume that they will all respond.

Over the next three years, approximately 129 respondents per year will be subject to these standards. The estimated number of respondents is based on U.S. Energy Information Administration (EIA) data<sup>2</sup> for the number of operating refineries in 2021 and was confirmed by the American Petroleum Industry (API). We assume that no petroleum refineries will either be constructed or reconstructed over the next three years of this ICR. However, we estimate that that two Subpart Ja affected facilities (FCCU, FCU, delayed coking units, FGCD, process heaters, flares, or sulfur recovery plants) at each of the 129 petroleum refineries will become subject to the provisions of Subpart Ja over the three-year period of this ICR (86 affected facilities per year) due to either construction, or reconstruction, or modification.

The Office of Management and Budget (OMB) approved the currently-active ICR without any "Terms of Clearance."

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

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

The EPA is charged under Section 111 of the Clean Air Act (CAA), as amended, to establish standards of performance for new stationary sources that reflect:

. . . application of the best technological system of continuous emissions reduction which (taking into consideration the cost of achieving such emissions reduction, or any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.

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<sup>2</sup> U.S. Energy Information Administration, "Number and Capacity of Petroleum Refineries", [https://www.eia.gov/dnav/pet/pet\\_pnp\\_cap1\\_dcu\\_nus\\_a.htm](https://www.eia.gov/dnav/pet/pet_pnp_cap1_dcu_nus_a.htm).

Section 111(a)(1).

The Agency refers to this charge as selecting the best demonstrated technology (BDT). Section 111 also requires that the Administrator review and, if appropriate, revise such standards every eight 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.

In the Administrator's judgment, PM, NO<sub>x</sub>, CO, SO<sub>2</sub>, H<sub>2</sub>S and reduced sulfur compounds (RSC) emissions from petroleum refineries either cause or contribute to air pollution that may reasonably be anticipated to endanger public health and/or welfare. Therefore, the NSPS were promulgated for this source category at 40 CFR Part 60, Subpart Ja.

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

The recordkeeping and reporting requirements in these standards ensure compliance with the applicable regulations which were promulgated in accordance with the Clean Air Act. The collected information is also used for targeting inspections and as evidence in legal proceedings.

Performance tests are required in order to determine an affected facility's initial capability to comply with these emission standards. Continuous emission monitors are used to ensure compliance with these same standards at all times. During the performance test a record of the operating parameters under which compliance was achieved may be recorded and used to determine compliance in place of a continuous emission monitor.

The notifications required in these standards are used to inform the Agency or delegated authority when a source becomes subject to the requirements of the regulations. The reviewing authority may then inspect the source to check if the pollution control devices are properly installed and operated, leaks are being detected and repaired, and that these standards are being met. The performance test may also be observed.

The required semiannual reports are used to determine periods of excess emissions,

identify problems at the facility, verify operation/maintenance procedures, and for compliance determinations.

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

The requested recordkeeping and reporting are required under 40 CFR Part 60, Subpart Ja.

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

For reports required to be submitted electronically, the information is sent through the EPA's CDX, using CEDRI, where the appropriate EPA regional office can review it, as well as for state and local agencies that have been delegated authority. If a state or local agency has adopted under its own authority its own standards for reporting or data collection, adherence to those non-Federal requirements does not constitute duplication.

For all other reports, 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 standards to implement the Federal standards, a copy of the report submitted to either the state or local agency can be sent to the Administrator in lieu of the report required by the Federal standards. Therefore, duplication does not exist.

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

An announcement of a public comment period for the renewal of this ICR was published in the *Federal Register* (86 FR 8634) on February 8, 2021. No comments were received on the burden published in the *Federal Register* for this renewal.

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

The Agency has consulted industry experts and internal data sources to project the number of refineries, affected facilities, and industry growth over the next three years. The primary source of information as reported by industry, in compliance with the recordkeeping and reporting provisions in these standards, is the Integrated Compliance Information System (ICIS). ICIS is EPA's database for the collection, maintenance, and retrieval of compliance data for industrial and government-owned facilities. The Agency also consulted the U.S. EIA to determine the number of refineries currently operating and has adjusted the number of refineries to 129, to reflect consolidation within the industry. The growth rate for the industry is based on our consultations with the Agency's internal industry experts. In this ICR, the number of affected facilities complying with the requirements of Subpart Ja at a refinery is based on information provided by the American Petroleum Industry (API) and the American Fuel & Petrochemical Manufacturers (AFPM) during the previous renewal of this ICR. For each existing affected facility (FCCU, FCU, delayed coking unit, FGCD, process heater, flare, or sulfur recovery plant) residing at a refinery, the respondent may elect to comply with Subpart J for one process, and

Subpart Ja for another process. Therefore, the number of respondents (129) included in the estimate for this ICR assumes that each refinery has at least one affected facility complying with Subpart Ja.

Industry trade associations and other interested parties were provided an opportunity to comment on the ‘burden’ associated with these standards as they were being developed and that these same standards have been reviewed previously to determine the minimum information needed for compliance purposes. In developing this ICR, we contacted both the American Petroleum Industry (API), at (202) 682-8000, and the American Fuel & Petrochemical Manufacturers (AFPM), at (202) 457-0480. The API responded to our inquiry and confirmed that the count of respondents (129) from the U.S. EIA was accurate.

It is our policy to respond after a thorough review of comments received since the last ICR renewal, as well as for those submitted in response to the first *Federal Register* notice. In this case, no comments were received.

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

Less-frequent information collection would decrease the margin of assurance that facilities are continuing to meet these standards. Requirements for information gathering and recordkeeping are useful techniques to ensure that good operation and maintenance practices are applied and that the emission limitations are met. If the information required by these standards was collected less-frequently, the proper operation and maintenance of control equipment and the possibility of detecting violations would be less likely.

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

These reporting or recordkeeping requirements do not violate any of the regulations promulgated by OMB under 5 CFR Part 1320, Section 1320.5.

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

Any 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 40000, September 8, 1978; 43 FR 42251, September 20, 1978; 44 FR 17674, March 23, 1979).

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

The reporting or recordkeeping requirements in these standards do not include sensitive questions.

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

**4(a) Respondents/SIC Codes**

The respondents to the recordkeeping and reporting requirements are petroleum refineries that were either constructed, modified, or reconstructed after May 14, 2007. The United States Standard Industrial Classification (SIC) code for the respondents affected by these standards is SIC 2911, which corresponds to the North American Industry Classification System (NAICS) 324110 for Petroleum Refineries.

**4(b) Information Requested**

**(i) Data Items**

In this ICR, all the data that are recorded or reported is required by the NSPS for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja).

A source must make the following reports:

<b>Notifications</b>	
Initial notifications:	§60.7(a)
Construction/reconstruction	§60.7(a)(1)
Actual Start-up	§60.7(a)(3)
Physical or Operational Change	§60.7(a)(4)
Demonstration of continuous monitoring system (CMS)	§60.7(a)(5)
Initial performance test results	§60.8(a), §60.104a(a)
Notification of initial performance test	§60.8(d), §60.104a(a)
Notification of Compliance status	§§60.11(a)-(c)
Alternative means of emission limitation	§60.103a(j)
Monitoring plan for each baghouse and bag leak detection system.	§60.105a(c)(2)
Submit measurement data for CEMS and CPMS for FCCU and FCU	§60.105a(h)(3)
Exemption from monitoring	§60.107a(b)(1)
The specific monitoring provisions of §60.105a, §60.106a and §60.107a with which the owner or operator intends to comply	§§60.108a(a)-(b)

<b>Reports</b>	
Annual PM performance tests on FCCU or FCU	§60.104a(b)
Periodic start-up, shutdown, malfunction reports	§60.7(c)(2)

<b>Reports</b>	
Flare management plan	§60.103a(b)
Excess emissions report	§60.7(c), §60.108a(d)

A source must keep the following records:

<b>Recordkeeping</b>	
Start-ups, shutdowns, malfunctions, periods where the continuous monitoring system is inoperative	§60.7(b)
All reports and notifications	§60.7
Emission test methods and other data needed to determine emissions	§60.104a
Flare management plan	§60.103a(a), §60.108a(c)(1)
Information to document conformance with bag leak detection system operation and maintenance requirements	§60.108a(c)(2)
Bag leak detection system alarms and actions	§60.108a(c)(3)
Coke burn-off rate and hours of operation for FCCU and FCU	§60.108a(c)(4)
Exemption determined to apply for each fuel gas stream.	§60.108a(c)(5)
Discharges above limit from flares, FGCD, or sulfur recovery plant and results of root cause analyses and corrective action analyses	§60.103a(c), §60.108a(c)(6)
H <sub>2</sub> S discharges from flares [sample analyses, calculated ratios]	§60.108a(c)(7)

### Electronic Reporting

Some of the respondents are using monitoring equipment that automatically records parameter data. Although personnel at the affected facility must still evaluate the data, internal automation has significantly reduced the burden associated with monitoring and recordkeeping at a plant site.

### **(ii) Respondent Activities**

<b>Respondent Activities</b>
Familiarization with the regulatory requirements.
Install, calibrate, maintain, and operate CMS for opacity, CO, SO <sub>2</sub> , and O <sub>2</sub> .
Perform initial performance test, Reference Method 1; 2; 3, 3A or, 3B; 5, 5B or, 5F; 6, 6A or 6C; 7, 7A, 7C, 7D or 7E; 10, 10A or 10B; 11; 15 or 15A; 16; 16A; 18; 19. Repeat performance tests if necessary.

<b>Respondent Activities</b>
Write the notifications and reports listed above.
Enter information required to be recorded above.
Submit the required reports developing, acquiring, installing, and utilizing technology and systems for collecting, validating, and verifying information.
Develop, acquire, install, and utilize technology and systems for processing and maintaining information.
Develop, acquire, install, and utilize technology and systems for disclosing and providing information.
Train personnel to be able to respond to a collection of information.
Transmit, or otherwise disclose the 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>
Observe initial performance tests and repeat performance tests if necessary.
Conduct on-site inspections as necessary.
Review notifications and reports, including performance test reports, and excess emissions reports, required to be submitted by industry.
Audit facility records.
Input, analyze, and maintain data in the Enforcement and Compliance History Online (ECHO) and ICIS.

### **5(b) Collection Methodology and Management**

Following notification of startup, the reviewing authority could inspect the source to determine whether the pollution control devices are properly installed and operated. Performance test reports are used by the Agency to discern a source's initial capability to comply with the emission standards and note the operating conditions under which compliance was achieved. Data and records maintained by the respondents are tabulated and published for use in compliance and enforcement programs. The semiannual reports are used for problem



identification, as a check on source operation and maintenance, and for compliance determinations.

Information contained in the reports is reported by state and local governments in the ICIS Air database, which is operated and maintained by EPA's Office of Compliance. ICIS is EPA's database for the collection, maintenance, and retrieval of compliance data for industrial and government-owned facilities. The EPA uses ICIS 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.

The records required by this regulation must be retained by the owner/operator for two years.

### **5(c) Small Entity Flexibility**

The 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. The recordkeeping and reporting requirements were selected within the context of Subpart Ja and the specific process equipment and pollutants. Due to technical considerations involving the process operations and the types of control equipment employed, the recordkeeping and reporting requirements are the same for both small and large entities. The Agency considers these to be the minimum requirements needed to ensure compliance and, therefore, cannot reduce them further for small entities. To the extent that larger businesses can use economies of scale to reduce their burden, the overall burden will be reduced.

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

The specific frequency for each information collection activity within this request is shown at the end of this document in Table 1: Annual Respondent Burden and Cost – NSPS for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja) (Renewal).

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

Table 1 documents the computation of individual burdens for the recordkeeping and reporting requirements applicable to the industry for the subpart 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 neither conduct nor 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 three years from these recordkeeping

and reporting requirements is estimated to be 431,000 hours (Total Labor Hours from Table 1 below). These hours are based on Agency studies and background documents from the development of the regulation, Agency knowledge and experience with the NSPS program, the previously-approved ICR, and any comments received.

## 6(b) Estimating Respondent Costs

### (i) Estimating Labor Costs

This ICR uses the following labor rates:

Managerial	\$153.55 (\$73.12 + 110%)
Technical	\$122.20 (\$58.19 + 110%)
Clerical	\$61.51 (\$29.29 + 110%)

These rates are from the United States Department of Labor, Bureau of Labor Statistics, March 2021, “Table 2. Civilian Workers, by occupational and industry group.” 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.

### (ii) Estimating Capital/Startup 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/startup costs are one-time costs when a facility becomes subject to these regulations. The annual operation and maintenance costs are the ongoing costs to maintain the monitors and other costs such as photocopying and postage.

### (iii) Capital/Startup vs. Operation and Maintenance (O&M) Costs

Capital/Startup vs. Operation and Maintenance (O&M) Costs						
(A)	(B)	(C)	(D)	(E)	(F)	(G)
Continuous Monitoring Device	Capital/Startup Cost for One Respondent	Number of New Respondents <sup>a</sup>	Total Capital/Startup Cost, (BxC)	Annual O&M Costs for One Respondent	Number of Respondents with O&M <sup>a</sup>	Total O&M, (ExF)
<i>New Affected Facilities<sup>b</sup></i>						
H <sub>2</sub> S CEMS – Flares <sup>c, d, e</sup>	\$358,000	0	\$0	\$59,700	0	\$0
Flare Vent Flow CPMS <sup>c, d, e</sup>						
CEMS – FCCU, FCU, FGCD, Sulfur plant <sup>f, g, h</sup>	\$155,000	29	\$4,495,000	\$25,000	58	\$1,450,000
CPMS – FCCU, FCU, FGCD, Sulfur plant <sup>f, i, j</sup>	\$86,000	29	\$2,494,000	\$100,000	58	\$5,800,000

<i>Existing Affected Facilities</i>						
H <sub>2</sub> S CEMS – Flares <sup>d, e, k</sup>						
Flare Vent Flow CPMS <sup>d, e, k</sup>	\$358,000	0	\$0	\$59,700	341	\$20,357,700
CEMS – FCCU, FCU, FGCD, Sulfur plant <sup>g, h, l</sup>	\$155,000	0	\$0	\$25,000	804	\$20,100,000
CPMS – FCCU, FCU, FGCD, Sulfur plant <sup>i, l, m</sup>	\$86,000	0	\$0	\$50,000	1,308	\$65,400,000
<b>Total <sup>n</sup></b>			\$6,989,000			\$113,107,700

**Footnotes:**

<sup>a</sup> In this table, the Number of New Respondents corresponds to the number of affected facilities (Flares, FCCU, FCU, FGCD, Sulfur plant) being constructed, re-constructed, or modified each year during this ICR period. In this table the Number of Respondents with O&M corresponds to newly affected facilities and existing affected facilities (Flares, FCCU, FCU, FGCD, Sulfur plant) complying with Subpart Ja.

<sup>b</sup> Per comments received from API/AFPM for the ICR renewal 2263.06, we assume that two facilities at each of the 129 petroleum refineries are constructed, reconstructed, or modified over the three-year period of this ICR (258 facilities over three years or 86 new affected facilities per year). We assume that 50% of the affected facilities newly subject to Subpart Ja will have capital and startup costs.

<sup>c</sup> Based on analysis of data in the previous ICR, EPA's Petroleum Refinery Database, and U.S. EIA's 2021 "Refinery Capacity Report", we assume that all flares at refineries are already subject to Subpart Ja and no existing or new flares will become subject to Subpart Ja during the three-year period of this ICR. Existing flares already subject to Subpart Ja that modify will not have capital/startup costs. O&M costs for these flares is shown under O&M Costs for Existing Affected Facilities.

<sup>d</sup> Assume that capital/startup costs for a new flare sulfur CEMS and flow monitor CPMS is \$358,000 (Docket Document EPA-HQ-OAR-2007-0011-0289, page 11). Capital costs have been increased from 2006 to 2020 \$ using the CEPCI Equipment Cost Index. Each flare has one H<sub>2</sub>S CEMs and one flow CPMS.

<sup>e</sup> Assume that the annual O&M costs of the flare sulfur CEMS and vent gas flow monitor is \$59,700 (Docket Document EPA-HQ-OAR- 2007-0011-0289, page 11). Costs have been increased from 2006 to 2020 \$ using the CEPCI Equipment Cost Index.

<sup>f</sup> We assume that 68% of the newly affected facilities are FCCU, FCU, FGCD, Sulfur Plant, or other process units (86 facilities per year x 68% = 58 (rounded)). We assume that 50% of the affected facilities newly subject to Subpart Ja will have capital and startup costs (58 facilities x 50% = 29 facilities). Per comments received from API/AFPM for the ICR renewal 2263.06, we assume that each new affected FCCU, FCU, FGCD, or Sulfur plant requires one CEMS and two CPMS.

<sup>g</sup> Assume that capital/ startup costs for a new FCCU NOx analyzer are \$155,000 (Docket Document EPA-HQ-OAR-2007-0011-0222, page 8). Capital costs have been increased from 2006 to 2020 \$ using the CEPCI Equipment Cost Index.

<sup>h</sup> Per comments received from API/AFPM for the ICR renewal 2263.06, we assume that O&M cost for each CEMS includes daily checks of 30 minutes, preventative maintenance, and parts for a total cost of \$25,000 per year.

<sup>i</sup> Per comments received from API/AFPM for the ICR renewal 2263.06, we assume that capital/startup costs for a single CPMS monitor are \$43,000 and there are two CPMS per newly affected FCCU, FCU, FGCD, or Sulfur plant affected facility.

<sup>j</sup> Per comments received from API/AFPM for the ICR renewal 2263.06, we assume that annual O&M costs for a single CPMS are \$50,000 and there are two CPMS per newly affected FCCU, FCU, FGCD, or Sulfur plant affected facility.

<sup>k</sup> Assumes that 70% (341) of the 487 existing flares at currently operating petroleum refineries are already subject to the provisions of Subpart Ja and each flare has one H<sub>2</sub>S CEMs and one flow CPMS. The other 30% of flares are expected to use the monitoring alternative for emergency flares and flares with flare gas recovery system. The number of flares at petroleum refineries (487) is derived by cross referencing the information in the "flares" table in the 2011 Petroleum Refinery Database (<https://www.epa.gov/stationary-sources-air-pollution/comprehensive-data-collected-petroleum-refining-sector>) with data from the U.S. Energy Information Administration's 'Refinery

Capacity Report' (<https://www.eia.gov/petroleum/refinerycapacity/>), which shows the 129 refineries operating as of January 1, 2021.

<sup>1</sup> The number of existing affected facilities subject to Subpart Ja has been increased from the number shown in the previous ICR renewal (2263.06) by three years of new and modified facilities. For CEMS units, this is 3 x 68 and for CPMS units, this is 3 x 68 x 2, as there are 2 CPMS units for each new affected facility.

<sup>m</sup> Assume that annual O&M costs for a single CPMS are \$50,000.

<sup>n</sup> Totals have been rounded to 3 significant figures. Figures may not add exactly due to rounding. Some double counting occurs due to counting costs for CEMS and CPMS separately.

The total capital/startup costs for this ICR are \$6,990,000 (rounded). This is the total of column D in the above table.

The total operation and maintenance (O&M) costs for this ICR are \$113,000,000 (rounded). This is the total of column G.

The average annual cost for capital/startup and operation and maintenance costs to industry over the next three years of the ICR is estimated to be \$120,000,000 (rounded). These are recordkeeping costs.

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

The only costs to the Agency are those costs associated with analysis of the reported information. EPA's overall compliance and enforcement program includes such activities as the 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 three years of the ICR is estimated to be \$141,000.

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

Managerial	\$69.04 (GS-13, Step 5, \$43.15 + 60%)
Technical	\$51.23 (GS-12, Step 1, \$32.02 + 60%)
Clerical	\$27.73 (GS-6, Step 3, \$17.33 + 60%)

These rates are from the Office of Personnel Management (OPM), 2021 General Schedule, which excludes locality rates of pay. The rates have been increased by 60 percent to account for the benefit packages available to Federal government employees. Details upon which this estimate is based appear at the end of this document in Table 2: Average Annual EPA Burden and Cost – NSPS for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja) (Renewal).

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

Based on our research for this ICR, on average over the next three years, approximately 129 existing respondents will be subject to these standards. It is estimated that no new petroleum refineries will be built, so no additional respondents per year will become subject to these same

standards. The overall average number of respondents, as shown in the table below, is 129 per year.

The number of respondents is calculated using the following table that addresses the three 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	86	129	0	86	129
2	86	129	0	86	129
3	86	129	0	86	129
Average	86	129	0	86	129

<sup>a</sup> New respondents include sources with constructed, reconstructed and modified affected facilities. We assume 2 facilities per refinery will modify and become subject to Subpart Ja during the three-year period of this ICR: (2 x 129 refineries = 258 facilities/3 years = 86 facilities per year). Based on U.S. EIA data for the number of operating refineries in 2021 ([https://www.eia.gov/dnav/pet/pet\\_pnp\\_cap1\\_dcu\\_nus\\_a.htm](https://www.eia.gov/dnav/pet/pet_pnp_cap1_dcu_nus_a.htm)) and correspondence with API, we assume there are 129 refineries subject to Subpart Ja.

Column D is subtracted to avoid double-counting respondents. As shown above, the average Number of Respondents over the three-year period of this ICR is 129.

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

<b>Total Annual Responses</b>				
(A)	(B)	(C)	(D)	(E)
Information Collection Activity	Number of Respondents	Number of Responses	Number of Existing Respondents That Keep Records But Do Not Submit Reports	Total Annual Responses E=(BxC)+D
Initial notification of construction/ reconstruction	86	1	0	86
Notification of anticipated startup	86	1	0	86
Notification of actual startup	86	1	0	86
Notification of performance test	86	1	0	86
Flare management plan <sup>a</sup>	28	1	0	28

Performance test results	86	1	0	86
Semiannual reports of excess emission	129	2	0	258
			Total	716

<sup>a</sup> We assume 2 facilities per refinery will modify or reconstruct and become subject to Subpart Ja during the three-year period of this ICR ( 2 x 129 refineries = 258 facilities/3 years = 86 facilities per year). Based on data collected in the prior ICR (ICR No. 2263.06), we assume that 32% of the modified/reconstructed facilities are flares (86 facilities per year x 32% = 28 flares per year). These flare facilities will need to re-submit a flare management plan.

The number of Total Annual Responses is 716.

The total annual labor costs are \$50,900,000. Details regarding these estimates may be found at the end of this document in Table 1: Annual Respondent Burden and Cost – NSPS for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja) (Renewal).

### **6(e) Bottom Line 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 at the end of this document, respectively, and summarized below.

#### **(i) Respondent Tally**

The total annual labor hours are 431,000. Details regarding these estimates may be found below in Table 1: Annual Respondent Burden and Cost – NSPS for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja) (Renewal).

We assume that burdens for managerial tasks take 5% of the time required for technical tasks because the typical tasks for managers are to review and approve reports. Clerical burdens are assumed to take 10% of the time required for technical tasks because the typical duties of clerical staff are to proofread the reports, make copies and maintain records.

Furthermore, the annual public reporting and recordkeeping burden for this collection of information is estimated to average 602 hours per response.

The total annual capital/startup and O&M costs to the regulated entity are \$120,000,000. The cost calculations are detailed in Section 6(b)(iii), Capital/Startup vs. Operation and Maintenance (O&M) Costs.

#### **(ii) The Agency Tally**

The average annual Agency burden and cost over next three years is estimated to be

2,830 labor hours at a cost of \$141,000; see below in Table 2: Average Annual EPA Burden and Cost – NSPS for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja) (Renewal).

We assume that burdens for managerial tasks take 5% of the time required for technical tasks because the typical tasks for managers are to review and approve reports. Clerical burdens are assumed to take 10% of the time required for technical tasks because the typical duties of clerical staff are to proofread the reports, make copies and maintain records.

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

There is an increase in burden from the most-recently approved ICR as currently identified in the OMB Inventory of Approved Burdens. This increase is due primarily to an increase in the number of facilities at existing petroleum refineries subject to Subpart Ja. The petroleum refining industry has been decreasing in size, but as facilities at refineries are constructed, modified, or reconstructed, they become newly subject to Subpart Ja. This ICR adjusts the number of facilities at refineries to reflect those sources constructed, modified, or reconstructed over the last three years. Since these newly affected facilities are required to install monitoring equipment to comply with the regulations, this has resulted in increases in capital/startup costs, performance testing costs, and operating and maintenance (O&M) costs, as well as for labor burden associated with periodic testing. There is also an increase in labor costs, which is wholly due to the use of updated labor rates. This ICR uses labor rates from the most-recent Bureau of Labor Statistics report (March 2021) to calculate respondent burden costs.

### **6(g) Burden Statement**

The annual public reporting and recordkeeping burden for this collection of information is estimated to average 602 hours per response. ‘Burden’ means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information either 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 neither conduct nor 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, EPA has established a public docket for this ICR under Docket ID Number EPA-HQ-OAR-2020-0667. An electronic version of the public docket is

available at <http://www.regulations.gov/>, which may be used to obtain a copy of the draft collection of information, submit or view public comments, access the index listing of the contents of the 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 in this document. The documents are also available for public viewing at the Enforcement and Compliance Docket and Information Center in the EPA Docket Center (EPA/DC), WJC West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. 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. Due to COVID-19 precautions, entry to the Reading Room is available by appointment only. Please contact personnel in the Reading Room to schedule an appointment. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the docket center is (202) 566-1752. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID Number EPA-HQ-OAR-2020-0667 and OMB Control Number 2060-0602 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 – NSPS for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja) (Renewal)**

<b>Burden Item</b>	<b>(A) Person- hours per occurrence</b>	<b>(B) Number of occurrences per year per respondent <sup>a</sup></b>	<b>(C) Person- hrs. per responden t per year (C=AxB)</b>	<b>(D) Respondents per year <sup>b</sup></b>	<b>(E) Technical person- hrs. per year (E=CxD)</b>	<b>(F) Management person-hrs. per year (F=Ex0.05)</b>	<b>(G) Clerical person- hrs. per year (G=Ex0.1)</b>	<b>(H) Annual costs (\$)<sup>c</sup></b>
1. Applications	N/A							
2. Survey and Studies								
A. Flare Management Plan	160	1	160	0	0	0	0	\$0
B. Flare Management Plan Revision <sup>b</sup>	8	1	8	28	224	11	22	\$30,470
C. Root Cause Analysis (flow)	45	4	180	129	23,220	1,161	2,322	\$3,158,581.77
D. Root Cause Analysis (sulfur)	24	3	72	129	9,288	464	929	\$1,263,432.71
3. Reporting Requirements								
A. Familiarize with rule requirements	1	1	1	129	129	6.5	13	\$17,547.7
B. Required Activities								
Initial performance tests on new facilities <sup>d</sup>	40	1	40	86	3,440	172	344	\$467,938.04
Repeat of initial performance tests on new facilities <sup>e</sup>	40	0.05	2	86	172	8.6	17	\$23,396.90
Initial CEMS Audits (RAA or CGA) new facilities <sup>f</sup>	36	1	36	86	3,096	155	310	\$421,144.24
CEMS Audits (RAA or CGA) existing facilities <sup>g</sup>	36	8.9	320	129	41,216	2,061	4,122	\$5,606,605.07
Initial Relative Accuracy Test new facilities <sup>f</sup>	24	6	144	86	12,384	619	1,238	\$1,684,576.94
Relative Accuracy Test existing facilities <sup>g</sup>	24	43.3	1040	129	134,102	6,705	13,410	\$18,241,748.32
Initial CPMS Audits (RAA or CGA) new facilities <sup>f</sup>	36	4	144	86	12,384	619	1,238	\$1,684,576.94
CPMS Audits (RAA or CGA)	36	25.6	920	129	118,721	5,936	11,872	\$16,149,412.34

existing facilities <sup>g</sup>								
C. Create Information	See 3B							
D. Gather Existing Information	See 3E							
E. Write Report <sup>h</sup>								
Notification of construction, reconstruction, or modification	2	1	2	86	172	9	17	\$23,396.90
Notification of anticipated startup	2	1	2	86	172	9	17	\$23,396.90
Notification of actual startup	2	1	2	86	172	9	17	\$23,396.90
Notification of initial performance test	2	1	2	86	172	9	17	\$23,396.90
Report of performance test	See 3B							
Semiannual Emissions Reports <sup>i</sup>	16	2	32	129	4,128	206	413	\$561,525.65
<b>Subtotal for Reporting Requirements</b>						<b>417,671</b>		<b>\$49,404,545</b>
4. Recordkeeping Requirements								
A. Familiarize with rule requirements	See 3A							
B. Plan Activities	See 3B							
C. Implement Activities	See 3B							
D. Develop Record System	N/A							
E. Time to Enter Information								
Records of operating parameters <sup>j</sup>	0.25	350	87.5	129	11,288	564	1,129	\$1,535,421.69
F. Train Personnel	N/A							
G. Audits	N/A							
<b>Subtotal for Recordkeeping Requirements</b>						<b>12,981</b>		<b>\$1,535,422</b>
<b>Total Labor Burden and Costs (rounded) <sup>k</sup></b>						<b>431,000</b>		<b>\$50,900,000</b>
<b>Total Capital and O&amp;M Cost (rounded) <sup>k</sup></b>								<b>\$120,000,000</b>
<b>GRAND TOTAL (rounded) <sup>k</sup></b>								<b>\$171,000,000</b>

**Assumptions**

<sup>a</sup> Occurrences per respondent per year is calculated as the number of affected facilities (flares, FCCU, FCU, FGCD, sulfur plant) times the occurrences per affected facility per respondent (refineries). For CEMS/CPMS Audits or RATA testing, this value refers to the number of monitors on an affected facility that requires audit or testing.

<sup>b</sup> Assume that there are approximately 129 petroleum refineries (respondents) that are subject to the rule over a 3-year period with at least one affected source. There will be no additional new petroleum refineries that will become subject to the rule over the three-year period of this ICR, but we assume that two facilities at each of the 129 petroleum refineries will become subject to the provisions of Subpart Ja over the three-year period of this ICR (86 affected facilities per year) due to being constructed, reconstructed, or modified and that these facilities will have initial performance testing costs. We assume 28 of these reconstructed or modified facilities will be existing flares already subject to Subpart Ja and that they will re-submit a flare management plan.

<sup>c</sup> This ICR uses the following labor rates: Managerial \$153.55 (\$73.12+ 110%); Technical \$122.20 (\$58.19 + 110%); and Clerical \$61.51 (\$29.29 + 110%). These rates are from the United States Department of Labor, Bureau of Labor Statistics, March 2021, “Table 2. Civilian Workers, by occupational and industry group.” 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>d</sup> We have assumed that it will take 40 hours for each respondent to perform initial performance tests.

<sup>e</sup> We have assumed that 5 percent of sources would have to repeat performance test due to failure.

<sup>f</sup> We assume that two facilities at each of the 129 petroleum refineries will become subject to the provisions of Subpart Ja over the three-year period of this ICR (86 affected facilities per year) due to being constructed, reconstructed, or modified and that these facilities will have initial performance testing costs. We assume one CEMS monitor and one CPMS monitor is needed for each flare and one CEMS monitor and two CPMS monitors are needed for each other newly affected facility (i.e. FCCU, FCU, FGCD, Sulfur plant). We assume that each new CEMS and CPMS monitor is audited at startup and once again in the first year (2x/yr), and that Relative Accuracy Audits or Cylinder Gas Audits take 36 hours. We assume that one initial relative accuracy test is required for each new CEMS and CPMS monitor (3 per new affected facility), that the relative accuracy test or RATA are conducted twice a year (3 x 2/yr), and take 24 hours per monitor.

<sup>g</sup> Subpart Ja requires regular relative accuracy evaluations of all monitors on existing affected facilities. We assume there are 8.9 CEMS at each refinery (341 flare CEMS + 804 other equipment CEMS)/129 refineries), that these CEMS are audited once per year, and that the Relative Accuracy Audits or Cylinder Gas Audits take 36 hours. We assume that relative accuracy tests are required for each CEMS and CPMS monitor (3 per existing affected facility), that there are 21.6 CEMS and CPMS per refinery (341 flare CEMS + 341 flare CPMS + 804 other equipment CEMS + 1,308 other equipment CPMS)/129 refineries, that the relative accuracy test or RATA are conducted twice a year, and take 24 hours per monitor. We assume there are 12.8 CPMS at each refinery (341 flare CPMS + 1,308 other equipment CPMS)/129 refineries), that these CPMS are audited twice per year, and that these Relative Accuracy Audits or Cylinder Gas Audits take 36 hours.

<sup>h</sup> We have assumed that each respondent will take 2 hours to write report.

<sup>i</sup> We have assumed that each respondent will take 8 hours twice per year to complete semiannual reports

<sup>j</sup> Assume operation 350 days per year as specified in the NSPS review document.

<sup>k</sup> Totals have been rounded to 3 significant figures. Figures may not add exactly due to rounding.

**Table 2: Average Annual EPA Burden and Cost – NSPS for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (40 CFR Part 60, Subpart Ja) (Renewal)**

Activity	(A) Person-hours per occurrence	(B) No. of occurrences per respondent per year	(C) Person-hours per respondent per year (C=AxB)	(D) Respondents per year <sup>a</sup>	(E) Technical Person-hours per year (E=CxD)	(F) Management person-hours per year (Ex0.05)	(G) Clerical person-hours per year (Ex0.1)	(H) Cost, \$ <sup>b</sup>
New Affected Facilities:								
Report Review								
Notification of construction, reconstruction, or modification <sup>c</sup>	2	1	2	86	172	8.6	17.2	\$9,882
Notification of anticipated startup <sup>d</sup>	0.5	1	0.5	86	43	2.15	4.3	\$2,471
Notification of actual startup <sup>d</sup>	0.5	1	0.5	86	43	2.15	4.3	\$2,471
Notification of performance test <sup>d</sup>	0.5	1	0.5	86	43	2.15	4.3	\$2,471
Flare management plans <sup>e</sup>	1	1	1	28	28	1.4	2.8	\$1,609
Review performance test results	8	1	8	86	688	34	69	\$39,529
Emission Reports	4.2	1	4.2	86	361	18	36	\$20,753
Existing Plants:								
Semiannual Emissions Reports <sup>f</sup>	4.2	2	8.4	129	1,084	54.18	108	\$62,258.24
<b>TOTAL (rounded)<sup>g</sup></b>					<b>2,830</b>			<b>\$141,000</b>

**Assumptions:**

<sup>a</sup> Assume that there are approximately 129 petroleum refineries (respondents) that are subject to the rule over a 3-year period. There will be no additional new petroleum refineries that will become subject to the rule over the three-year period of this ICR, but we assume that two facilities at each of the 129 petroleum refineries will become subject to the provisions of Subpart Ja over the three-year period of this ICR (86 affected facilities per year) due to being constructed, reconstructed, or modified and that these facilities will perform initial performance testing.

<sup>b</sup> This cost is based on the average hourly labor rate as follows: Managerial \$69.04 (GS-13, Step 5, \$43.15 + 60%); Technical \$51.23 (GS-12, Step 1, \$32.02 + 60%); and Clerical \$27.73 (GS-6, Step 3, \$17.33 + 60%). This ICR assumes that Managerial hours are 5 percent of Technical hours, and

Clerical hours are 10 percent of Technical hours. These rates are from the Office of Personnel Management (OPM), 2021 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.

<sup>c</sup> We assume that the review of the 'Notification of construction, reconstruction, or modification' submitted by all sources with newly affected facilities (due to being constructed, reconstructed, or modified) will take 2 hours to complete.

<sup>d</sup> We assume that the review of the 'Notification of anticipated startup', 'Notification of actual startup', and 'Notification of performance test' submitted by all sources with newly affected facilities (due to being constructed, reconstructed, or modified) will each take 0.5 hours to complete.

<sup>e</sup> Some flare management plans will need more review than others, depending on complexity of flare connections and baseline calculations. We assume 1 hour is the average amount of time spent per plan.

<sup>f</sup> We have assumed that all existing plants will be required to complete semiannual emissions reports.

<sup>g</sup> Totals have been rounded to 3 significant figures. Figures may not add exactly due to rounding.