SUPPORTING STATEMENT

AMENDMENTS TO NESHAP FOR PETROLEUM REFINERIES

PART A

1.0 Identification of the Information Collection

(a) Title and Number of the Information Collection.

"Amendments to NESHAP for Petroleum Refineries." This is a supplement to the information collection request (ICR) under OMB Control Number 2060-0340 to include the cost of the final amendments to 40 CFR Part 63 Subpart CC.

(b) Short Characterization.

Respondents are owners or operators of existing or new petroleum refineries located in the United States and territories that are major sources of hazardous air pollutants (HAP). The current rule applies to miscellaneous process vents, storage vessels, wastewater streams, equipment leaks, gasoline loading racks, and marine vessel loading operations. The final amendments add provisions for the control of HAP emissions from heat exchange systems, which includes closed-loop recirculation systems with cooling towers and once-through cooling water systems. Respondents must implement a monthly sampling program to detect and repair total strippable volatile organic compound (VOC) leaks from heat exchange systems according to the Texas Commission on Environmental Quality's "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources". Exclusions are included for heat exchangers with low HAP content process fluids and high pressure cooling water. The owner or operator must repair any leak that is greater than 6.2 parts per million by volume (ppmv) of total strippable VOC within 45 days. Provisions also include the delay of repair of leaks under specified conditions. Operation and maintenance requirements for the sampling equipment require one mid-point calibration prior to each sampling event. The final amendments include recordkeeping and reporting requirements to assure compliance with the leak detection and repair program. The final amendments allow up to 3 years to comply with the requirements for heat exchange systems. The information collection requirements for the

final amendments are listed in Attachment 1. The remaining amendments clarify or correct provisions in the current rule and do not affect information collection requirements.

2. Need For and Use of the Collection

(a) Need/Authority for the Collection.

Section 112 of the Clean Air Act (CAA) requires EPA to establish NESHAP for each category or subcategory of new and existing major and area sources of HAP that are listed for regulation under CAA section 112(c). These technology-based standards require the maximum emission reductions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts) and are commonly referred to as maximum achievable control technology (MACT) standards. The EPA is then required to review these technology-based standards and revise them "as necessary (taking into account developments in practices, processes, and control technologies)" no less frequently than every 8 years, under CAA section 112(d)(6). The final amendments revise the current NESHAP for petroleum refineries to establish MACT standards for heat exchange systems.

Certain records and reports are necessary for the Administrator to confirm the compliance status of major sources, 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. Under the part 63 General Provisions, the owner or operator must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(b) Use/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 emissions limits 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 plants, records, or processes may need inspection.

3. Nonduplication, Consultations, and Other Collection Criteria

(a) Nonduplication.

A computer search of EPA's ongoing ICRs revealed no duplication of information-gathering efforts.

(b) Public Notice Required Prior to ICR Submission to OMB.

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

(c) Consultations.

The amendments were developed in consultation with individual plants, State agencies, and trade associations. The non-EPA persons consulted on the information collection activities are identified in Table 1.

TABLE 1. PERSONS CONSULTED ON THE INFORMATION COLLECTION ACTIVITIES

Contact	Organization	Telephone Number
John Wagner	American Petroleum Institute	(202) 682-8000
Steve Hagle	Texas Commission on Environmental Quality	(512) 239-3900
David Friedman	National Petrochemical & Refiners Association	(202) 457-0480

(d) Effects of Less Frequent Collection.

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

(e) General Guidelines.

None of the guidelines in 5 CFR 1320.6 are being exceeded.

(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 (see 40 CFR 2; 41 FR 36902, September 1, 1976; amended by 43 FR 39999, September 28, 1978; 43 FR 42251, September 28, 1978; 44 FR 17674, March 23, 1979).

(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

(a) Respondents/NAICS Codes.

Respondents under Subpart CC are owners or operators of any existing or new petroleum refinery that is a major source of HAP emissions. The North American Industry Classification System (NAICS) code for petroleum refineries is 324110. We estimate that 153 existing refineries are subject to the current rule; one new refinery is projected during the 3 year period of this ICR.

(b) Information Requested.

(i) Data Items, Including Recordkeeping Requirements. Attachment 1, Source Data and Information Requirements, summarizes the data items, including recordkeeping and reporting requirements.

(ii) Respondent Activities. The respondent activities required by the final amendments are identified in Table 2 and are introduced in section 6(a).

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

(a) Agency Activities.

The Agency activities are provided in Tables 3 and are introduced in section 6(c).

(b) Collection Methodology and Management.

Data and records maintained by the respondents are tabulated and published for use in compliance and enforcement programs of the delegated permitting authority. The monitoring reports submitted to the permitting authority are used for problem identification, as a check on source operation and maintenance, and for compliance determinations. EPA is the permitting authority until the State agency is delegated authority to implement the final rule. Therefore, information contained in the reports submitted to the Regional Administrator will be entered into the Air Facility System (AFS), which is operated and maintained by EPA's Office of Compliance. AFS is EPA’s database for the collection, maintenance, and retrieval of compliance data for approximately 125,000 industrial and government-owned facilities. EPA uses the AFS for tracking air pollution compliance and enforcement by local and state regulatory

agencies, EPA regional offices and EPA headquarters. EPA and its delegated authorities can edit, store, retrieve and analyze the data.

(c) Small Entity Flexibility.

The Small Business Administration defines a small entity as a firm having no more than 1,500 employees. EPA's economic analysis shows that the final amendments will not have an adverse economic impact on a significant number of small or large entities. Based on our economic impact analysis, the amendments will result in a nationwide net annualized cost of about $3.0 million, which includes a credit of about $2.2 million per year from reductions in product losses. Of the 24 small entities that would incur annualized costs as a result of the final amendments, annualized costs for each of them are below 0.02 percent of revenues; therefore, no adverse economic impacts are expected for any small entity. Thus, the costs associated with the final amendments will not result in any "significant" adverse economic impact for any small or large entity.

(d) Collection Schedule.

The specific frequency for each information collection activity within this request is shown in Table 2.

6. Estimating the Burden and Cost of the Collection

(a) Estimating Respondent Burden.

The annual burden estimates for the final amendments are shown in Table 2. Burden hour assumptions are based on experience with other standards, information from public comments on the final amendments, and data collected after proposal. Estimates of cost and labor hours for heat exchange system leak detection and repair program are based on Texas Commission on Environmental Quality cost analysis, details of which are included in the docket (Docket ID Number EPA-HQ-OAR-2003-0146) and in the November 10, 2008, supplemental proposal.

(b) Estimating Respondent Costs.

The information collection activities for the final amendments are presented in Table 2.

(i) *Estimating Labor Costs*. Labor rates and associated costs are based on Bureau of Labor Statistics (BLS) data. Technical, management, and clerical mean hourly rates for private industry workers were taken from the United States Department of Labor, Bureau of Labor

Statistics, "May 2007 National Industry-Specific Occupational Employment and Wage Estimates for NAICS 324100-Petroleum and Coal Products Manufacturing" available at http://www.bls.gov/oes/current/naics4_324100.htm. Wages for occupational groups are used as the basis for the labor rates with a total compensation of $54.42/hour for technical (Petroleum Engineer, Code 17-2171); $24.60 for installation, maintenance and repair (Code 49-0000); $20.60 for plant operator (Code 51-8099); $60.88/hour for managerial (Engineering Manager, Code 11-9041), and $17.91/hour for clerical (Office and Administrative Support, Code 43-0000). These rates represent salaries plus fringe benefits and do not include the cost of overhead. An overhead rate of 110 percent is used to account for these costs. The fully-burdened hourly wage rates used to represent respondent labor costs are: technical at $114.28, installation, maintenance and repair at $51.66; plant operator at $43.26; management at $127.85, and clerical at $37.61.

(ii) Estimating Capital and Operations and Maintenance (O&M) Costs. The leak detection and repair program for heat exchange systems will require the purchase and installation of an air stripping column apparatus for sample collection and an FID analyzer to determine the concentration of air stripped compounds although samples may also be collected in canisters for shipment to analytical laboratories. The air stripping column is portable and may be used for multiple heat exchange systems.

(iii) Capital/Startup vs. O&M Costs. The capital costs of an air stripping column and equipment and an FID is $116,870, although approximately 9 percent of refineries are expected to already have this equipment . The O&M costs are based on one mid-point calibration every month for 180 heat exchange systems per year. Capital/startup costs for existing and new sources are estimated at $16,306,000 during the 3-year period of this ICR with O&M costs of $61,711/yr.

(iv) Annualizing Capital Costs. The annualized cost associated with the final amendments during the 3-year period of this ICR is $2,321,640 using capital discount rate of 7 percent over 10 years.

(c) Estimating Agency Burden and Cost.

Because the information collection requirements were developed as an incidental part of standards development, no costs can be attributed to the development of the information

collection requirements. Because reporting and recordkeeping requirements on the part of the respondents are required under the operating permits rules in 40 CFR part 70 or part 71 and the part 63 NESHAP General Provisions, no operational costs will be incurred by the Federal Government. Publication and distribution of the information are part of the Compliance Data System, with the result that no Federal costs can be directly attributed to the ICR. Examination of records to be maintained by the respondents will occur incidentally as part of the periodic inspection of sources that is part of EPA's overall compliance and enforcement program, and, therefore, is not attributable to the ICR. The only costs that the Federal government would incur are user costs associated with the analysis of the reported information, as presented in Table 3.

The Agency labor rates are from the Office of Personnel Management (OPM) 2008 General Schedule which excludes locality rates of pay. These rates can be obtained from Salary Table 2008-GS available on the OPM website, http://www.opm.gov/oca/08tables/html/gs_h.asp. The government employee labor rates are $14.96/hour for clerical (GS-6, Step 3), $27.65 for technical (GS-12, Step 1), and $37.27/hr for management (GS-13, Step 5). These rates were increased by 60 percent to include fringe benefits and overhead. The fully-burdened wage rates used to represent Agency labor costs are: clerical at $23.94; technical at $44.24, and management at $59.63.

(d) Estimating the Respondent Universe and Total Burden and Costs.

There are 153 existing petroleum refineries that are subject to the Subpart CC rule. One new refinery is expected during the next 3 years. Consequently, the average number of respondents during the 3 year period of this ICR is 51.33 (154/3 = 51.33).

The components of the total annual responses attributable to the final amendments are notifications of compliance status for heat exchange systems at new and existing refineries and semiannual compliance reports containing information on heat exchange systems for existing and new refineries. Therefore, the number of total annual responses is 154.0 (51.33 annual average respondents x 1 notification of compliance status for heat exchange systems, 51.33 annual average respondents x 2 semiannual compliance reports).

(e) Bottom Line Burden Hours and Cost Tables.

(i) Respondent tally. The bottom line respondent burden hours and costs, presented in Table 2 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 monitoring, recordkeeping, and reporting requirements in the final amendments to Subpart CC for new and existing petroleum refineries is 13,647 person hours with an annual average cost of $1,048,783 with annualized capital and O&M costs of $2,321,640 and $61,711, respectively. The total annual average burden for the final amendments will be $3,432,134.

(ii) The Agency tally. The total annual Federal Government cost is $10,187 for 236.1 total annual hours. The bottom line Agency burden hours and costs presented in Table 3 are calculated by adding person-hours per year down each column for technical, managerial, and clerical staff, and by adding down the cost column.

(iii) Variations in the annual bottom line. This section does not apply since no significant variation is anticipated.

(f) Reasons for Change in Burden.

The change in burden estimate reflects the additional requirements of the final amendments to the NESHAP for petroleum refineries (40 CFR Part 83, Subpart CC).

(g) Burden Statement

The average annual respondent burden for the final amendments to the NESHAP for petroleum refineries is estimated at 89 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 currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR part 63 are listed in 40 CFR part 9.

To comment on the Agency's need for this information the accuracy of the provided burden estimates, and any suggestions for minimizing respondent burden, including through the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID No. EPA-HQ-OAR-2003-0146, which is available for online viewing at 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 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. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742. An electronic version of the public docket is available at 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, DC 20503, Attention Desk Officer for EPA. Please include the EPA Docket ID Number EPA-HQ-OAR-2003-0146 and the OMB Control Number 2060-0340 in any correspondence.

PART B

This section is not applicable because statistical methods are not used in data collection associated with the final amendments.

TABLE 2. ANNUAL RESPONDENT BURDEN AND COST

Burden item	(A) Person-hours per occurrence	(B) No. of occurrences per respondent	(C) Person-hours per respondent (C=A*B)	(D) Respondents per year[a]	(E) Technical person-hours per year (E=C*D)	(F) Installation, maintenance and repair person-hours per year (F=C*D)	(G) Plant operator person-hours per year (G=C*D)	(F) Management person-hours per year (E*0.05)	(G) Clerical person-hours per year (E*0.1)	(H) Cost[b], $
1. Applications	N/A									
2. Surveys and Studies	N/A									
3. Acquisition, Installation, and Utilization of Technology and Systems[c]										
Technical	32	1	32	51.33	1,643					$187,762
Management	2	1	2	51.33				103		$13,125
4. Reporting Requirements										
A. Read instructions	2	1	2	51.33	103			5	10	$12,774
B. Required activities										
Heat exchange system sampling/analysis[d]										
Technical	3.18	12.0	38	51.33	1,959					$223,846
Plant operator	9.53	12.0	114	51.33			5,870			$253,940
Triggered monitoring of leak[e]	4	2	8	51.33	411					$46,928
Technical	1	2	2	51.33	103					$11,732
Plant operator	3	2	6	51.33			308			$13,324
Heat exchange system leak repair[f]	40	0.15	6	51.33		308				$15,910
C. Create information	See 4B									
D. Gather existing information	See 4B									
E. Write report	See 4B									
Notification of compliance status – heat exchange systems[g]	1	1	1	51.33	51			2.6	5.1	$6,387
Semiannual report[h]	2	2	4	51.33	205			10	20	$25,549
5. Recordkeeping Requirements										
A. Read instructions	See 4A									
B. Plan activities	See 4A									
C. Implement activities	See 4A									
D. Record data[i]										
Technical	1	12	12	51.33	616					$70,392

Burden item	(A) Person-hours per occurrence	(B) No. of occurrences per respondent	(C) Person-hours per respondent (C=A*B)	(D) Respondents per year[a]	(E) Technical person-hours per year (E=C*D)	(F) Installation, maintenance and repair person-hours per year (F=C*D)	(G) Plant operator person-hours per year (G=C*D)	(F) Management person-hours per year (E*0.05)	(G) Clerical person-hours per year (E*0.1)	(H) Cost[b], $
Operator	1	12	12	51.33			616			$26,646
E. Time to transmit or disclose information	1	2	2	51.33	103			5	10	$12,774
F. Time to train personnel[j]	20	1	20	51.33	1,027			51	103	$127,743
G. Time for audits	N/A									
TOTAL LABOR BURDEN AND COST					**13,647 labor hours/yr**					**$1,048,783**
Annualized cost of capital[k]	**$2,321,640**									
Operation and maintenance (O&M)[l]	**$61,711**									
Total Annual Cost (Labor + Annualized Capital + O&M)	**3,432,134**									

N/A = not applicable.

[a] There are 153 existing petroleum refineries that are subject to the Subpart CC rule. One new refinery is expected during the next 3 years. Consequently, the average number of respondents during the 3 year period of this ICR is 51.33 (154÷3= 51.33).

[b] This ICR uses the following labor rates: technical at $114.28; installation, maintenance, and repair at $51.66; plant operator at $43.26; management at $127.85; and clerical at $37.61. The rates from the United States Department of Labor, Bureau of Labor Statistics, "May 2007 National Industry-Specific Occupational Employment and Wage Estimates for NAICS 324100-Petroleum and Coal Products Manufacturing" have been increased by 110% to account for the benefit packages available to those employed by private industry.

[c] Labor and costs based on estimates from EPA MACT floor cost analysis. Planning costs for a single heat exchange system based on 32 hours for engineer and 2 labor hours for management.

[d] EPA estimates that 486 of 540 heat exchange systems at 153 existing refineries will need to implement the new heat exchange system monitoring requirements and one new refinery with an estimated 4 heat exchange systems will become subject to the Subpart CC rule during the 3-year clearance period of this ICR. Therefore, the annual average number of heat exchange systems per refinery is 3.18 (486 + 4 = 490 heat exchange systems/154 refineries). Labor and costs based on estimates from EPA MACT floor cost analysis. Labor costs for setup of portable air stripping column and sampling/analysis for one heat exchange system based on 1 labor hour for engineer and 3 labor hours for operator. Assume 3.18 towers per refinery and event occurs 12 times per year.

[e] Labor and costs based on estimates from EPA MACT floor cost analysis. Labor costs for additional sampling and analysis triggered by leak based on 1 hour for engineer and 3 labor hours for an operator for 1 event per year for 2 heat exchangers per refinery.

[f] Labor and costs based on estimates from EPA MACT floor cost analysis. Repair costs based on 40 labor hours for 1 repair event per year for 15 percent of heat exchangers.

[g] Assume each existing refinery must submit notification of compliance status for heat exchange systems.

[h] Labor and costs based on estimates from EPA MACT floor cost analysis. Assume 2 hours per occurrence at 2 times per year.

[i] Labor and costs based on estimates from EPA MACT floor cost analysis. Assume 24 labor hours per month per refinery for recordkeeping requirements.

[j] Labor and costs based on estimates from EPA MACT floor cost analysis. Assume training of 2 labor hours per year for 10 operators per facility.

[k] Based on a total capital investment of $16.3 million and a capital recovery factor of 0.1424 (10 year life at 7 percent annual interest).

[l] Operation and maintenance costs based on one mid-point calibration of sampling equipment prior to each sampling event (12 times/yr) at 0.25 hr by one engineer ($114.28/yr) for annual average of 180 heat exchange systems (540 heat exchange systems/3 = 180).

TABLE 3. ANNUAL BURDEN AND COST TO THE AGENCY

Burden Item	**(A) Person hours per occurrence**	**(B) Occurrences per respondent**	**(C) Plants per year [a]**	**(D) Technical hours/year (D=A*B*C)**	**(E) Management hours/year (E=0.05*D)**	**(F) Clerical-hours/year (F=0.1*D)**	**(G) Cost[b], $**
Report Review:							
Notification of compliance status – heat exchange systems	2	1	51.33	102.7	5.1	10.3	$5,094
Semiannual compliance report	1	2	51.33	102.7	5.1	10.3	$5,094
TOTAL BURDEN AND COST				**236.1 hours/yr**			$10,187

[a] There are 153 existing petroleum refineries that are subject to the Subpart CC rule. One new refinery is expected during the next 3 years. Consequently, the average number of respondents during the 3 year period of this ICR is 51.33 (154÷3= 51.33). No travel is expected.

[b] This ICR uses the following average hourly labor rates: 59.63 for managerial (GS-13, Step 5, $37.27 x 1.6), $44.24 (GS-12, Step 1, $27.65 x 1.6) for technical and $23.94 (GS-6, Step 3, $14.96 x 1.6) for clerical. These rates are from the Office of Personnel Management (OPM) "2008 General Schedule" which excludes locality rates of pay.

ATTACHMENT 1. INFORMATION REQUIREMENTS

Requirement	Rule citation	General Provisions citation
Monitoring		
Heat exchange system leak detection and repair[a]	§63.654	NA
Notifications		
Notification of compliance status – heat exchange systems	§63.655(f)(1)(vi)	40 CFR 63.9(h)
Records		
Heat exchange systems sampling results, leak detection and repair[a]	§63.655(i)(4)	NA
Reports		
Leak detection and repair results in semiannual compliance reports	§63.655(g)(9)	NA

[a] The final amendments require a monthly sampling program for heat exchange systems subject to Subpart CC with records of sampling results and reports of leaks detected, repaired, or for which delays were repaired. Information of heat exchange systems subject to the requirements and those that are exempt must be included in the notification of compliance status report.