Division of Environment
Curtis State Office Building
1000 SW Jackson St., Suite 400
Topeka, KS 66612-1367

Kansas
Department of Health
and Environment

Phone: 785-296-1535
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Janet Stanek, Secretary

Laura Kelly, Governor

DRAFT, 2022

Source ID No. 1130003

Haley Nance
Environmental Engineer
CHS McPherson Refinery, Inc.
2000 South Main Street
McPherson Kansas 67460

Re: Air Emission Source Construction Permit

Dear Ms. Nance:

The Kansas Department of Health and Environment (KDHE) reviewed CHS McPherson Refinery, Inc.'s (CHSMRI) proposal to replace four (4) existing process heaters with two (2) new process heaters, replace a burner in a process heater, and increase capacity to 120,000 barrels per day at their petroleum refinery located in McPherson, Kansas. Enclosed is the Air Emission Source Construction Permit for the proposed project.

Please review the permit carefully since it obligates CHSMRI to certain requirements.

Notify through the Kansas Environmental Information Management System (KEIMS) using the **BOA Notification – General form** within 30 days of completing the installation of the emission units so that an evaluation can be conducted.

As provided for in K.S.A. 65-3008b(e), an owner or operator may request a hearing within 15 days after affirmation, modification, or reversal of a permit decision pursuant to subsection (b) of K.S.A. 65-3008a. In the Request for Hearing, the owner or operator shall specify the provision of this act or rule and regulation allegedly violated, the facts constituting the alleged violation, and secretary's intended action. Such request must be submitted to the Director, Office of Administrative Hearings, 1020 S. Kansas Avenue, Topeka, Kansas 66612-1327. Failure to submit a timely request shall result in a waiver of the right to hearing.

Include the above source ID number in all communications with the KDHE regarding this facility.

Bureau of Air
Permitting Section
Curtis State Office Building, Suite 310
Topeka, KS 66612-1366

Phone 785-296-6421
Fax: 785-559-4256
stephen.bartels@ks.gov

If you have any questions regarding this document, please contact me at (785) 296-6421.

Sincerely,

Stephen F. Bartels
Engineering Associate
Air Permitting Section

SFB:
Enclosure
c: NCDO
CSP02990 v1.0

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AIR EMISSION SOURCE CONSTRUCTION PERMIT

Source ID No.: 1130003

Effective Date: DRAFT

Source Name: CHS McPherson Refinery, Inc.

SIC Code: 2911; Petroleum Refining

NAICS Code: 324110; Petroleum Refinery

Source Location: 2000 South Main Street
McPherson, Kansas 67460

Mailing Address: 2000 South Main Street
McPherson, Kansas 67460

Contact Person: Haley Nance
Environmental Engineer
(620) 241-9207
Haley.Nance@chsinc.com

This permit is issued pursuant to K.S.A. 65-3008 as amended.

I. Description of Activity Subject to Air Pollution Control Regulations

CHS McPherson Refinery, Inc. (CHSMRI) owns and operates a petroleum refinery in McPherson, Kansas. CHSMRI applied for the following changes:

1. Replace four (4) existing heaters (EU-FPU-5, EU-FPU-6, EU-FPU-7, and EU-FPU-8) with two (2) new heaters (EU-FPU-18 and EU-FPU-19) in the #1 Crude Unit.
2. Replace the shared stack for the #2 Crude process heaters (EU-FPU-10-1 and EU-FPU-10-2)

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with a stack for each heater.
3. Replace the burners in the Platformer Feed Heater (EU-PLT-6) with burners that are designed to lessen emission of oxides of nitrogen (NO_X).
4. Replace the Unifier charge valve.
5. Install an additional relief valve on the #1 Crude Unit Prefractionator.
6. Various other changes that will allow the facility to increase production rate. See Section III. of this permit for a complete list of changes.

The project will increase capacity and allow the facility to achieve a total charge rate of 120,000 barrels per day (BPD). The heater upgrades (items 1. through 3. above) are planned for the 2024 refinery-wide turnaround and the valve installations (items 4. and 5. above) can be completed outside of a turnaround.

The project will trigger modification for the Straight Run (SR) Gas Plant process unit and it will become subject to 40 CFR Part 60 Subpart GGGa, in accordance with 40 CFR 60.590a(b). The SR Gas Plant is subject to 40 CFR Part 60 Subpart GGG before the modification. The #1 Crude and Alkylation units are and will continue to be subject to 40 CFR Part 60 Subpart GGGa.

The two new process heaters in the #1 Crude Unit (EU-FPU-18 and EU-FPU-19) will be subject to 40 CFR Part 60 Subpart Ja. The fuel gas source that will feed these heaters is currently monitored by a certified continuous emissions monitoring system (CEMS) at a common source fuel drum. In accordance with 40 CFR 60.104a(j)(4)(iv), performance tests are not required when a new affected fuel gas combustion device is added to a common source of fuel gas that previously demonstrated compliance, therefore, the new heaters will not trigger a performance test for hydrogen sulfide (H_2S).

The #2 Crude Unit process heaters (EU-FPU-10-1 and EU-FPU-10-2) are subject to 40 CFR Part 60 Subpart Ja and will remain subject following the stack modifications. Each new stack will be monitored using CEMS for NO_X and oxygen (O_2) per 40 CFR 60.107a and performance testing will be required per 40 CFR 60.104a.

The Platformer Feed Heater (EU-PLT-6) is not subject to 40 CFR Part 60 Subpart J or Subpart Ja. The heater has not been constructed, modified, or reconstructed since June 11, 1973. The burner replacements do not trigger reconstruction because the cost of the project will not exceed 50% of the cost of a new heater. Per 40 CFR 60.14, the burner replacements do not trigger modification because the NO_X emission rate will not increase. The burner replacements do not trigger modification for oxides of sulfur (SO_X), because the maximum emission rate will not increase.

Equipment leaks from the project are subject to 40 CFR Part 63 Subpart CC. The process units involved in the project are also subject to 40 CFR Part 60 Subpart GGGa. In accordance with 40 CFR 63.640(p)(2), the owner or operator must only comply with the provisions of 40 CFR Part 60 Subpart GGGa for equipment leaks, except that pressure relief devices in organic HAP service must only comply with the requirements in 40 CFR 63.648(j).

The heaters affected by this permit are all affected sources of 40 CFR Part 63 Subpart DDDDD. The two new process heaters (EU-FPU-18 and EU-FPU-19) are new because construction will be commenced after June 4, 2010. The existing process heaters in this permit (EU-FPU-10-1, EU-FPU-10-2, and EU-PLT-6) are existing because constructed or reconstructed have not commenced since June 10, 2010.

The emissions of volatile organic compounds (VOC), particulate matter (PM), particulate matter with less than or equal to 10 microns in aerodynamic diameter (PM_{10}), particulate matter with less than or

equal to 2.5 microns in aerodynamic diameter ($PM_{2.5}$), carbon monoxide (CO), NO_X, SO_X, and hazardous air pollutants (HAPs) were evaluated as part of the review process. This project is subject to the provisions of K.A.R. 28-19-300 (Construction permits and approvals; applicability) because the facility requested a federally enforceable limitation per K.A.R. 28-19-302(b).

The Kansas Department of Health and Environment (KDHE) reviewed Prevention of Significant Deterioration (PSD) applicability for this project. CHSMRI is an existing major stationary source for PSD. The hybrid test [40 CFR 52.21(a)(2)(iv)(*f*)] was employed to determine if the emissions increase is significant as defined by 40 CFR 52.21(b)(23). The emissions increase for each New Source Review (NSR) regulated pollutant (see Section IV.) is below the significant threshold, therefore the project is not a major modification. The provisions of 40 CFR 52.21(r)(6) apply with respect to NO_X, PM, PM_{10}, and $PM_{2.5}$ because there is a reasonable possibility, within the meaning of 40 CFR 52.21(r)(6)(vi), that the project that is not a part of a major modification may result in a significant emissions increase.

CHSMRI requested a federally enforceable limitation for the two new heaters, EU-FPU-18 and EU-FPU-19, to reduce the project emissions increase below the significant thresholds. CHSMRI proposed a NO_X emission limit of 0.030 pounds per million British thermal units (lb/MMBtu) higher heating value basis. The proposed numerical limit is more stringent than the NO_X limit in 40 CFR 60.102a(g)(2)(i)(B), however, the 365-day rolling averaging period for the proposed limit does not constitute compliance with the 30-day rolling averaging period in 40 CFR 60.102a(g)(2)(i)(B).

II. Significant Applicable Air Regulations

The following air quality regulations were determined to be applicable to this source:

A. K.A.R. 28-19-30 through 32, Indirect Heating Equipment Emissions.

B. K.A.R. 28-19-650, Emissions Opacity Limits.

C. K.A.R. 28-19-720, New Source Performance Standards, which adopts by reference 40 CFR Part 60 Subpart A, *General Provisions*, and 40 CFR Part 60 Subpart Ja, *Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced after May 14, 2007*.

D. K.A.R. 28-19-720, New Source Performance Standards, which adopts by reference 40 CFR Part 60 Subpart A, *General Provisions*, and 40 CFR Part 60 Subpart GGGa, *Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced after November 7, 2006*.

E. K.A.R. 28-19-750, National Emission Standards for Hazardous Air Pollutants, which adopts by reference 40 CFR Part 63 Subpart A, *General Provisions*, and 40 CFR Part 63 Subpart CC, *National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries*.

F. K.A.R. 28-19-750, National Emission Standards for Hazardous Air Pollutants, which adopts by reference 40 CFR Part 63 Subpart A, *General Provisions*, and 40 CFR Part 63 Subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*.

III. Air Emission Unit Technical Specifications

A. The following equipment or equivalent will be installed:

#1 Crude Unit

1. One (1) 186.0 million British thermal unit per hour (MMBtu/hr) on a higher heating value (HHV) basis natural draft process heater, Prefractionator Heater HF-0013, firing refinery gas (**EU-FPU-18**).

2. One (1) 102.6 MMBtu/hr HHV natural draft process heater, #1 Crude Heater HF-0014, firing refinery gas (**EU-FPU-19**).

3. One (1) relief valve on the #1 Crude unit Prefractionator.

4. #1 Crude Fuel Gas Filters

5. Intermittent Blowdown Drum (VV-1205)

6. Steam Drum (VV-1203)

7. Continuous Blowdown Drum (VV-1206)

8. Boiler Feedwater Circulation Pumps (PA/B-1901)

9. Middle Distillate 225# Steam Generator

Alky and Straight Run Gas Plant

10. Absorber Stripper

11. C3/C4 Condensers

12. C3/C4 Preheater

13. Debutanizer Bottoms Air Cooler

B. The following equipment will be decommissioned:

#1 Crude Unit

1. One (1) 70 MMBTU/hr HHV natural draft refinery gas-fired Crude Reboiler Heater HF-004 (**EU-FPU-5**)

2. One (1) 70 MMBTU/hr HHV natural draft refinery gas-fired Prefractionator Reboiler Heater HF-005 (**EU-FPU-6**)

3. One (1) 70 MMBTU/hr HHV natural draft refinery gas-fired Prefractionator Reboiler Heater HF-006 (**EU-FPU-7**)

4. One (1) 70 MMBTU/hr HHV natural draft refinery gas-fired #1 Crude Charge Heater HF-007 (**EU-FPU-8**)

5. Steam drum (VV-0079)

6. Mud drum (VV-0080)

7. Steam Generator (EA-0162)

8. Boiler Feedwater Circulation Pumps (PA/B-1650)

C. The following equipment will be modified:

Unifier

1. One (1) charge valve.

#2 Crude Unit

2. Two (2) #2 Crude Unit Process Heaters HF-009 and HF-010 (**EU-FPU-10-1 and EU-FPU-10-2**). Natural draft, refinery gas-fired process heaters. The stacks will be reconfigured from a common stack to separate individual stacks. The modification will allow for each heater to operate at 110 MMBtu/hr HHV.

Platformer

3. One (1) 53.90 MMBtu/hr HHV Platformer Feed Heater HP-001 (**EU-PLT-6**). The burners will be replaced with low-NO_X burners.

Alky and Straight Run Gas Plant

4. Debutanizer

5. Debutanizer Reboiler

6. Debutanizer Trap-out Reboiler

7. Debutanizer Overhead Trim Cooler

8. C3/C4 Splitter Overhead Pump

9. SR Low Stage Suction Drum

10. SR Interstage Drum

IV. Emissions Estimates from Proposed Activity

Pollutant	Projected Actual Emissions (PAE)[1], Existing Units	Baseline Actual Emissions (BAE)[2,3], Existing Units	Potential-to-emit[4] (PTE), New Units	Emissions Increase (EI)[5], All Units
	Tons per year			
CO	560.17	555.94	37.90	42.12
NO_X	622.37	625.98	37.90	34.29
VOC	100.02	91.26	2.53	11.28
PM	123.62	116.23	6.30	13.74
PM_{10}	81.29	79.64	6.30	8.00
$PM_{2.5}$	81.14	79.53	6.30	7.95
SO_X	33.43	30.40	12.38	15.41

[1] Projected actual emissions means the maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a regulated NSR pollutant in any one of the 5 years (12-month period) following the date the unit resumes regular operation after the project, or in any one of the 10 years following that date, if the project involves increasing the emissions unit's design capacity or its potential to emit that regulated NSR pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source. [40 CFR 52.21(b)(41)]

[2] Baseline actual emissions means the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the Administrator for a permit required under 40 CFR 52.21 or by the reviewing authority for a permit required by a plan, whichever is earlier. For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero. [40 CFR 52.21(b)(48)(i) and (ii)]

[3] The 24-month period selected for the baseline actual emissions is January 1, 2021 through December 31, 2022.

[4] Potential-to-emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on a capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. [40 CFR 52.21(b)(4)]

[5] EI = PAE (for existing units) – BAE (for existing units) + PTE (for new units) – 0 (BAE for new units) [40 CFR 52.21(a)(2)(iv)(*f*)]

V. Air Emission Limitations and Conditions

A. For each of the new process heaters (**EU-FPU-18** and **EU-FPU-19**), the owner or operator shall not discharge to the atmosphere NO_X emissions in excess of 0.030 lb/MMBtu, as determined daily on a 365 successive calendar day rolling average basis.

1. Monitoring and Recordkeeping

a. The owner or operator shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration of NO_X emissions into the atmosphere, in accordance with 40 CFR 60.107a(d).

B. The owner or operator shall performance test the Platformer Feed Heater HP-001 (**EU-PLT-6**) after the burners are replaced with the low-NO_X burners to verify that NO_X emissions do not exceed 0.040 lb/MMBtu higher heating value basis. Performance testing shall be conducted within 60 days after achieving the maximum production rate at which the heater will be operated, but not later than 180 days after startup.

1. The owner or operator shall conduct performance testing, notifications, reporting of results, and meet deadlines in accordance with 40 CFR 60.8.

2. The owner or operator shall submit a performance test protocol at least 30 days before the performance test. The protocol must be approved by KDHE. The owner or operator shall provide KDHE at least 30 days prior notice of the performance testing to afford KDHE the opportunity to have an observer present.

3. The owner or operator shall report performance test results to KDHE within 30 days of the test.

4. The owner or operator shall conduct performance testing according to the following test methods and procedures:

a. Method 1 of Appendix A-1 to 40 CFR Part 60 for sample and velocity traverses;

b. Method 2 of Appendix A-1 to 40 CFR Part 60 for velocity and volumetric flow rate;

c. Method 3, 3A, or 3B of Appendix A-2 to 40 CFR Part 60 for gas analysis. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference - see 40 CFR 60.17) is an acceptable alternative to EPA Method 3B of Appendix A-2 to 40 CFR Part 60;

d. Method 7, 7A, 7C, 7D, or 7E of Appendix A-4 to 40 CFR Part 60 for moisture content and for the concentration of NO_X calculated as NO_2; the duration of each test run must be no less than four (4) hour. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference - see 40 CFR 60.17) is an acceptable alternative to EPA Method 7 or 7C of Appendix A-4 to 40 CFR Part 60.

e. The owner or operator shall determine heat input to the process heater in MMBtu/hr during each performance test run by measuring fuel gas flow rate and heating value content according to the methods provided in 40 CFR 60.107a(d)(5) and (d)(4) or (d)(7), respectively.

C. The owner or operator shall monitor the emissions of NO_X, PM, PM_{10}, and $PM_{2.5}$ that could increase as a result of the project and that is emitted by any emissions units identified in the project application submittal and calculations; and calculate and maintain a record of the annual emissions in tons per year on a calendar basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity or potential-to-emit that regulated NSR pollutant at such emissions unit. [40 CFR 52.21(r)(6)(iii)]

D. If the unit is an existing unit, the owner or operator shall submit a report to KDHE if the annual emissions of NO_X, PM, PM_{10}, and $PM_{2.5}$ in tons per year, from the project exceed the baseline actual emissions by a significant amount as defined in 40 CFR 52.21(b)(23), and if such emissions differ from the preconstruction projection. Such report shall be submitted to KDHE within 60 days after the end of such year. The report shall contain the information listed in 40 CFR 52.21(r)(6)(v)(*a*) through (*c*). [40 CFR 52.21(r)(6)(v)]

E. The owner or operator shall make the information required to be documented and maintained pursuant to 40 CFR 52.21(r)(6) available for review upon a request for inspection by the Administrator or the general public pursuant to the requirements contained in 40 CFR 70.4(b)(3)(viii). [40 CFR 52.21(r)(7)]

F. A person shall not cause or permit the emission of particulate matter from any indirect heating equipment exceeding the specifications in table H-1. [K.A.R. 28-19-31(a)]

G. A person shall not cause or permit visible contaminant emissions from any indirect heating equipment which equals or exceeds 20 percent opacity. [K.A.R. 28-19-31(b)(2)]

H. Except as provided in K.A.R. 28-19-31 or in other applicable air quality regulations, opacity of visible air emissions from any emission unit shall not exceed the following limits: [40 CFR 28-19-650(a)]

1. 40 percent opacity for any emission unit, other than a portable source, that existed on or before January 1, 1971 and that has not been relocated after January 1, 1971; and [40 CFR 28-19-650(a)(2)]

2. 20 percent opacity for any other emission unit. [40 CFR 28-19-650(a)(3)]

I. **The new process heaters (EU-FPU-18 and EU-FPU-19) are subject to the applicable requirements in 40 CFR Part 60 Subpart Ja, Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced after May 14, 2007.**

1. The owner or operator shall not burn in any fuel gas combustion device any fuel gas that contains H_2S in excess of 162 ppmv (parts per million by volume) determined hourly on a 3-hour rolling average basis and H_2S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis. [40 CFR 60.102a(g)(1)(ii)]

2. For each natural draft process heater, the owner or operator shall comply with the limit in either 40 CFR 60.102a(g)(2)(i)(A) or (B). The owner or operator may comply with either limit at any time, provided that the appropriate parameters for each alternative are monitored as specified in 40 CFR 60.107a; if fuel gas composition is not monitored as specified in 40 CFR 60.107a(d), the owner or operator must comply with the concentration limits in 40 CFR 60.102a(g)(2)(i)(A). [40 CFR 60.102a(g)(2)(i)]

   a. 40 ppmv (dry basis, corrected to 0-percent excess air) determined daily on a 30-day rolling average basis; or [40 CFR 60.102a(g)(2)(i)(A)]

   b. 0.040 lb/MMBtu higher heating value basis determined daily on a 30-day rolling average basis. [40 CFR 60.102a(g)(2)(i)(B)]

3. The owner or operator that operates a fuel gas combustion device shall conduct a root cause analysis and a corrective action analysis for the following condition: [40 CFR 60.103a(c)]

   a. For a fuel gas combustion device, each exceedance of an applicable short-term emissions limit in 40 CFR 60.102a(g)(1) if the sulfur dioxide (SO_2) discharge to the atmosphere is 227 kg (500 lb) greater than the amount that would have been emitted if the emissions limits had been met during one or more consecutive periods of excess emissions or any 24-hour period, whichever is shorter. [40 CFR 60.103a(c)(2)]

4. A root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a discharge meeting the condition specified in 40 CFR 60.103a(c)(2). Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in 40 CFR 60.103a(d)(1) through (5). [40 CFR 60.103a(d)]

   a. If a single continuous discharge meets the condition specified in 40 CFR 60.103a(c)(2) for 2 or more consecutive 24-hour periods, a single root cause analysis and corrective action analysis may be conducted. [40 CFR 60.103a(d)(1)]

   b. If discharges occur that meet the condition specified in 40 CFR 60.103a(c)(2) for more than one affected facility in the same 24-hour period, initial root cause analyses shall be conducted for each affected facility. If the initial root cause analyses indicate that the discharges have the same root cause(s), the initial root cause analyses can be recorded as a single root cause analysis and a single corrective action analysis may be conducted. [40 CFR 60.103a(d)(5)]

5. The owner or operator shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to 40 CFR 60.103a(d) in accordance with the applicable requirements in 40 CFR 60.103a(e)(1) through (3). [40 CFR 60.103a(e)]

   a. All corrective action(s) must be implemented within 45 days of the discharge for which the root cause and corrective action analyses were required or as soon thereafter as practicable. If an owner or operator concludes that corrective action should not be conducted, the owner or operator shall record and explain the basis

for that conclusion no later than 45 days following the discharge as specified in 40 CFR 60.108a(c)(6)(ix). [40 CFR 60.103a(e)(1)]

b. For corrective actions that cannot be fully implemented within 45 days following the discharge for which the root cause and corrective action analyses were required, the owner or operator shall develop an implementation schedule to complete the corrective action(s) as soon as practicable. [40 CFR 60.103a(e)(2)]

c. No later than 45 days following the discharge for which a root cause and corrective action analyses were required, the owner or operator shall record the corrective action(s) completed to date, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates as specified in 40 CFR 60.108a(c)(6)(x). [40 CFR 60.103a(e)(3)]

6. Performance Testing

a. The owner or operator shall conduct a performance test for each fuel gas combustion device to demonstrate initial compliance with each applicable emissions limit in 40 CFR 60.102a according to the requirements of 40 CFR 60.8. The notification requirements of 40 CFR 60.8(d) apply to the initial performance test and to subsequent performance tests (as required by the Administrator), but does not apply to performance tests conducted for the purpose of obtaining supplemental data because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments. [40 CFR 60.104a(a)]

b. In conducting the performance tests required by 40 CFR Part 60 Subpart Ja (or as requested by the Administrator), the owner or operator shall use the test methods in 40 CFR Part 60, Appendices A-1 through A-8 or other methods as specified in 40 CFR 60.104a, except as provided in 40 CFR 60.8(b). [40 CFR 60.104a(c)]

c. The owner or operator shall determine compliance with the NO_X limits in 40 CFR 60.102a(g) for each fuel gas combustion device according to the test methods in 40 CFR 60.104a(i)(1) through (8), as applicable. [40 CFR 60.104a(i)]

d. The owner or operator shall determine compliance with the applicable H_2S emissions limit in 40 CFR 60.102a(g)(1) for a fuel gas combustion device according to the test methods and procedures in 40 CFR 60.104a(j)(4). Test methods and procedures shall be in accordance with 40 CFR 60.104a(j)(4) through 40 CFR 60.104a(j)(4)(iii), except as specified by 40 CFR 60.104a(j)(4)(iv). [40 CFR 60.104a(j)]

i. If monitoring is conducted at a single point in a common source of fuel gas as allowed under 40 CFR 60.107a(a)(2)(iv), only one performance test is required. That is, performance tests are not required when a new affected fuel gas combustion device is added to a common source of fuel gas that previously demonstrated compliance. [40 CFR 60.104a(j)(4)(iv)]

7. Monitoring

a. The owner or operator of a fuel gas combustion device that is subject to 40 CFR 60.102a(g)(1) and elects to comply with the H_2S concentration limits in 40 CFR 60.102a(g)(1)(ii) shall comply with 40 CFR 60.107a(a)(2). [40 CFR 60.107a(a)]

b. The owner or operator electing to comply with 40 CFR 60.102(g)(2)(i)(A) shall install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration (dry basis, 0-percent excess air) of NO_X emissions into the atmosphere according to the requirements in 40 CFR 60.107a(c)(1) through (5). The monitor must include an O_2 monitor for correcting the data for excess air. [40 CFR 60.107a(c)]

c. The owner or operator electing to comply with 40 CFR 60.102(g)(2)(i)(B) shall install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration (dry basis, 0-percent excess air) of NO_X emissions into the atmosphere and shall determine the F factor of the fuel gas stream no less frequently than once per day according to the monitoring requirements in 40 CFR 60.107a(d)(1) through (4). [40 CFR 60.107a(d)]

d. For the purpose of reports required by 40 CFR 60.7(c), periods of excess emissions for fuel gas combustion devices subject to the emissions limitations in 40 CFR 60.102a(g) are defined as specified in 40 CFR 60.107a(i)(1) through (5). Determine a rolling 3-hour as the arithmetic average of the applicable 1-hour averages (e.g., a rolling 3-hour average is the arithmetic average of three contiguous 1-hour averages). Determine a rolling 30-day or a rolling 365-day average as the arithmetic average of the applicable daily averages (e.g., a rolling 30-day average is the arithmetic average of 30 contiguous daily averages). [40 CFR 60.107a(i)]

8. Recordkeeping and Reporting

a. The owner or operator subject to the emissions limitations in 40 CFR 60.102a shall comply with the notification, recordkeeping, and reporting requirements in 40 CFR 60.7 and other requirements as specified in 40 CFR 60.108a. [40 CFR 60.108a(a)]

b. The owner or operator shall notify the Administrator of the specific monitoring provisions of 40 CFR 60.107a with which the owner or operator intends to comply. Notifications required by this paragraph shall be submitted with the notification of initial startup required by 40 CFR 60.7(a)(3). [40 CFR 60.108a(b)]

c. The owner or operator shall maintain the following records: [40 CFR 60.108a(c)]

i. For each fuel gas stream to which one of the exemptions listed in 40 CFR 60.107a(a)(3) applies, records of the specific exemption determined to apply for each fuel stream. If the owner or operator applies for the exemption described in 40 CFR 60.107a(a)(3)(iv), the owner or operator must keep a copy of the application as well as the letter from the

Administrator granting approval of the application. [40 CFR 60.108a(c)(5)]

ii. Records of discharges greater than 500 lb SO_2 in excess of the allowable limits from a fuel gas combustion device. The following information shall be recorded no later than 45 days following the end of a discharge exceeding the thresholds: [40 CFR 60.108a(c)(6)]

a) A description of the discharge. [40 CFR 60.108a(c)(6)(i)]

b) The date and time the discharge was first identified and the duration of the discharge. [40 CFR 60.108a(c)(6)(ii)]

c) The measured or calculated cumulative quantity of gas discharged over the discharge duration. If the discharge duration exceeds 24 hours, record the discharge quantity for each 24-hour period. Engineering calculations are allowed for fuel gas combustion devices. [40 CFR 60.108a(c)(6)(iii)]

d) For each discharge greater than 500 lb SO_2 in excess of the applicable short-term emissions limit in 40 CFR 60.102a(g)(1) from a fuel gas combustion device, either the measured concentration of H_2S in the fuel gas or the measured concentration of SO_2 in the stream discharged to the atmosphere. Process knowledge can be used to make these estimates for fuel gas combustion devices. [40 CFR 60.108a(c)(6)(v)]

e) For each discharge greater than 500 lb SO_2 in excess of the allowable limits from a fuel gas combustion device, the cumulative quantity of H_2S and SO_2 released into the atmosphere. For fuel gas combustion devices, assume 99-percent conversion of H_2S to SO_2. [40 CFR 60.108a(c)(6)(vii)]

f) The steps that the owner or operator took to limit the emissions during the discharge. [40 CFR 60.108a(c)(6)(viii)]

g) The root cause analysis and corrective action analysis conducted as required in 40 CFR 60.103a(d), including an identification of the affected facility, the date and duration of the discharge, a statement noting whether the discharge resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under 40 CFR 60.103a(e). [40 CFR 60.108a(c)(6)(ix)]

h) For any corrective action analysis for which corrective actions are required in 40 CFR 60.103a(e), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for

implementation, including proposed commencement and completion dates. [40 CFR 60.108a(c)(6)(x)]

d. The owner or operator shall submit an excess emissions report for all periods of excess emissions according to the requirements of 40 CFR 60.7(c) except that the report shall contain the information specified in 40 CFR 60.108a(d)(1) through (7). [40 CFR 60.108a(d)]

J. **The #2 Crude Unit process heaters (EU-FPU-10-1 and EU-FPU-10-2) will continue to be subject to the applicable requirements in 40 CFR Part 60 Subpart Ja, Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced after May 14, 2007. The change in stack configuration will trigger performance tests in accordance with 40 CFR 60.104a and continuous monitoring in accordance with 40 CFR 60.107a at each new stack.**

1. The owner or operator shall continue to comply with the H_2S limit of 162 ppmv determined hourly on a 3-hour rolling average basis and H_2S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis from 40 CFR 60.102a(g)(1)(ii).

2. The owner or operator shall continue to comply with the NO_X limit of 40 ppmv (dry basis, corrected to 0-percent excess air) determined daily on a 30-day rolling average basis; or 0.040 lb/MMBtu higher heating value basis determined daily on a 30-day rolling average basis from 40 CFR 60.102a(g)(2)(i)(A) or (B).

3. Performance Testing

a. The owner or operator shall conduct a performance test for the #2 Crude Unit process heaters (EU-FPU-10-1 and EU-FPU-10-2) to demonstrate initial compliance with each applicable emissions limit in 40 CFR 60.102a according to the requirements of 40 CFR 60.8. The notification requirements of 40 CFR 60.8(d) apply to the initial performance test and to subsequent performance tests (as required by the Administrator), but does not apply to performance tests conducted for the purpose of obtaining supplemental data because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments. [40 CFR 60.104a(a)]

b. In conducting the performance tests required by 40 CFR Part 60 Subpart Ja (or as requested by the Administrator), the owner or operator shall use the test methods in 40 CFR Part 60, Appendices A-1 through A-8 or other methods as specified in 40 CFR 60.104a, except as provided in 40 CFR 60.8(b). [40 CFR 60.104a(c)]

c. The owner or operator shall determine compliance with the NO_X limits in 40 CFR 60.102a(g) for each fuel gas combustion device according to the test methods in 40 CFR 60.104a(i)(1) through (8), as applicable. [40 CFR 60.104a(i)]

d. The owner or operator shall determine compliance with the applicable H_2S emissions limit in 40 CFR 60.102a(g)(1) for a fuel gas combustion device according to the test methods and procedures in 40 CFR 60.104a(j)(4). Test methods and procedures shall be in accordance with 40 CFR 60.104a(j)(4)

through 40 CFR 60.104a(j)(4)(iii), except as specified by 40 CFR 60.104a(j)(4)(iv). [40 CFR 60.104a(j)]

i. If monitoring is conducted at a single point in a common source of fuel gas as allowed under 40 CFR 60.107a(a)(2)(iv), only one performance test is required. That is, performance tests are not required when a new affected fuel gas combustion device is added to a common source of fuel gas that previously demonstrated compliance. [40 CFR 60.104a(j)(4)(iv)]

4. Monitoring

a. The owner or operator of a fuel gas combustion device that is subject to 40 CFR 60.102a(g)(1) and elects to comply with the H_2S concentration limits in 40 CFR 60.102a(g)(1)(ii) shall comply with 40 CFR 60.107a(a)(2). [40 CFR 60.107a(a)]

b. The owner or operator electing to comply with 40 CFR 60.102(g)(2)(i)(A) shall install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration (dry basis, 0-percent excess air) of NO_X emissions into the atmosphere according to the requirements in 40 CFR 60.107a(c)(1) through (5). The monitor must include an O_2 monitor for correcting the data for excess air. [40 CFR 60.107a(c)]

c. The owner or operator electing to comply with 40 CFR 60.102(g)(2)(i)(B) shall install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration (dry basis, 0-percent excess air) of NO_X emissions into the atmosphere and shall determine the F factor of the fuel gas stream no less frequently than once per day according to the monitoring requirements in 40 CFR 60.107a(d)(1) through (4). [40 CFR 60.107a(d)]

d. For the purpose of reports required by 40 CFR 60.7(c), periods of excess emissions for fuel gas combustion devices subject to the emissions limitations in 40 CFR 60.102a(g) are defined as specified in 40 CFR 60.107a(i)(1) through (5). Determine a rolling 3-hour as the arithmetic average of the applicable 1-hour averages (e.g., a rolling 3-hour average is the arithmetic average of three contiguous 1-hour averages). Determine a rolling 30-day or a rolling 365-day average as the arithmetic average of the applicable daily averages (e.g., a rolling 30-day average is the arithmetic average of 30 contiguous daily averages). [40 CFR 60.107a(i)]

5. Recordkeeping and Reporting

a. The owner or operator subject to the emissions limitations in 40 CFR 60.102a shall comply with the notification, recordkeeping, and reporting requirements in 40 CFR 60.7 and other requirements as specified in 40 CFR 60.108a. [40 CFR 60.108a(a)]

b. The owner or operator shall maintain the following records: [40 CFR 60.108a(c)]

i. For each fuel gas stream to which one of the exemptions listed in 40 CFR 60.107a(a)(3) applies, records of the specific exemption determined to

apply for each fuel stream. If the owner or operator applies for the exemption described in 40 CFR 60.107a(a)(3)(iv), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application. [40 CFR 60.108a(c)(5)]

ii. Records of discharges greater than 500 lb SO_2 in excess of the allowable limits from a fuel gas combustion device. The following information shall be recorded no later than 45 days following the end of a discharge exceeding the thresholds: [40 CFR 60.108a(c)(6)]

a) A description of the discharge. [40 CFR 60.108a(c)(6)(i)]

b) The date and time the discharge was first identified and the duration of the discharge. [40 CFR 60.108a(c)(6)(ii)]

c) The measured or calculated cumulative quantity of gas discharged over the discharge duration. If the discharge duration exceeds 24 hours, record the discharge quantity for each 24-hour period. Engineering calculations are allowed for fuel gas combustion devices. [40 CFR 60.108a(c)(6)(iii)]

d) For each discharge greater than 500 lb SO_2 in excess of the applicable short-term emissions limit in 40 CFR 60.102a(g)(1) from a fuel gas combustion device, either the measured concentration of H_2S in the fuel gas or the measured concentration of SO_2 in the stream discharged to the atmosphere. Process knowledge can be used to make these estimates for fuel gas combustion devices. [40 CFR 60.108a(c)(6)(v)]

e) For each discharge greater than 500 lb SO_2 in excess of the allowable limits from a fuel gas combustion device, the cumulative quantity of H_2S and SO_2 released into the atmosphere. For fuel gas combustion devices, assume 99-percent conversion of H_2S to SO_2. [40 CFR 60.108a(c)(6)(vii)]

f) The steps that the owner or operator took to limit the emissions during the discharge. [40 CFR 60.108a(c)(6)(viii)]

g) The root cause analysis and corrective action analysis conducted as required in 40 CFR 60.103a(d), including an identification of the affected facility, the date and duration of the discharge, a statement noting whether the discharge resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under 40 CFR 60.103a(e). [40 CFR 60.108a(c)(6)(ix)]

h) For any corrective action analysis for which corrective actions are required in 40 CFR 60.103a(e), a description of the corrective

action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates. [40 CFR 60.108a(c)(6)(x)]

e. The owner or operator shall submit an excess emissions report for all periods of excess emissions according to the requirements of 40 CFR 60.7(c) except that the report shall contain the information specified in 40 CFR 60.108a(d)(1) through (7). [40 CFR 60.108a(d)]

K. **Equipment in the Straight Run Gas Plant are subject to 40 CFR Part 60 Subpart GGGa, Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced after November 7, 2006.**

1. The owner or operator shall comply with the requirements of 40 CFR 60.482-1a through 40 CFR 60.482-10a as soon as practicable, but no later than 180 days after initial startup. [40 CFR 60.592a(a)]

2. The owner or operator shall comply with the provisions of 40 CFR 60.485a except as provided in 40 CFR 60.593a. [40 CFR 60.592a(d)]

3. Recordkeeping and Reporting

a. Each owner or operator subject to the provisions of this subpart shall comply with the provisions of 40 CFR 60.486a and 40 CFR 60.487a. [40 CFR 60.592a(e)]

4. Exceptions

a. The owner or operator may comply with the following exceptions to the provisions of 40 CFR Part 60 Subpart VVa. [40 CFR 60.593a(a)]

i. Compressors in hydrogen service are exempt from the requirements of 40 CFR 60.592a if the owner or operator demonstrates that a compressor is in hydrogen service. [40 CFR 60.593a(b)(1)]

ii. Each compressor is presumed not to be in hydrogen service unless the owner or operator demonstrates that the piece of equipment is in hydrogen service. For a piece of equipment to be considered in hydrogen service, it must be determined that the percent hydrogen content can be reasonably expected always to exceed 50 percent by volume. For purposes of determining the percent hydrogen content in the process fluid that is contained in or contacts a compressor, procedures that conform to the general method described in ASTM E260-73, 91, or 96, E168-67, 77, or 92, or E169-63, 77, or 93 (incorporated by reference as specified in 40 CFR 60.17) shall be used. [40 CFR 60.593a(b)(2)]

iii. The owner or operator may use engineering judgment rather than procedures in 40 CFR 60.593a(b)(2) to demonstrate that the percent content exceeds 50 percent by volume, provided the engineering judgment demonstrates that the content clearly exceeds 50 percent by volume.

When the owner or operator and the Administrator do not agree on whether a piece of equipment is in hydrogen service, however, the procedures in 40 CFR 60.593a(b)(2) shall be used to resolve the disagreement. [40 CFR 60.593a(b)(3)(i)]

iv. If an owner or operator determines that a piece of equipment is in hydrogen service, the determination can be revised only after following the procedures in 40 CFR 60.593a(b)(2). [40 CFR 60.593a(b)(3)(ii)]

v. Any existing reciprocating compressor that becomes an affected facility under provisions of 40 CFR 60.14 or 40 CFR 60.15 is exempt from 40 CFR 60.482-3a(a), (b), (c), (d), (e), and (h) provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of 40 CFR 60.482-3a(a), (b), (c), (d), (e), and (h). [40 CFR 60.593a(c)]

vi. The owner or operator may use the following provision in addition to 40 CFR 60.485a(e): Equipment is in light liquid service if the percent evaporated is greater than 10 percent at 150 °C as determined by ASTM Method D86-78, 82, 90, 93, 95, or 96 (incorporated by reference as specified in 40 CFR §60.17). [40 CFR 60.593a(d)]

vii. Open-ended valves or lines containing asphalt as defined in 40 CFR 60.591a are exempt from the requirements of 40 CFR 60.482-6a(a) through (c). [40 CFR 60.593a(f)]

viii. Connectors in gas/vapor or light liquid service are exempt from the requirements in 40 CFR 60.482-11a, provided the owner or operator complies with 40 CFR 60.482-8a for all connectors, not just those in heavy liquid service. [40 CFR 60.593a(g)]

L. **The project includes equipment that will be subject to the equipment leaks standards of 40 CFR Part 63 Subpart CC, National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries.**

1. Equipment leaks that are also subject to the provisions of 40 CFR Part 60 Subpart GGGa are required to comply only with the provisions specified in 40 CFR Part 60 Subpart GGGa, except that pressure relief devices in organic HAP service must only comply with the requirements in 40 CFR 63.648(j). [40 CFR 63.640(p)(2)]

M. **The new process heaters (EU-FPU-18 and EU-FPU-19) are subject to the applicable requirements in 40 CFR Part 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The affected source is each new process heater, in accordance with 40 CFR 63.7490(a)(2). The process heaters are new because construction will commence after June 4, 2010, in accordance with 40 CFR 63.7490(b).**

1. The owner or operator must meet the requirements in 40 CFR 63.7500(a)(1) and (3). [40 CFR 63.7500(a)]

    a. The owner or operator must meet each emission limit and work practice standard in Table 3 to 40 CFR Part 63 Subpart DDDDD that applies to the process heaters. [40 CFR 63.7500(a)(1)]

    b. At all times, the owner or operator must operate and maintain affected sources (as defined in 40 CFR 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.7500(a)(3)]

2. The owner or operator shall comply with the General Provisions in 40 CFR 63.1 through 40 CFR 63.15, applicable as described in Table 10 to 40 CFR Part 63 Subpart DDDDD. [40 CFR 63.7565]

3. Compliance

    a. The owner or operator must demonstrate initial compliance with the applicable work practice standards in Table 3 to 40 CFR Part 63 Subpart DDDDD within the applicable annual schedule as specified in 40 CFR 63.7515(d) following the initial compliance date specified in 40 CFR 63.7495(a). Thereafter, the owner or operator is required to complete the applicable annual tune-up as specified in 40 CFR 63.7515(d). [40 CFR 63.7510(g)]

    b. The owner or operator must demonstrate continuous compliance with each work practice standard in Table 3 to 40 CFR Part 63 Subpart DDDDD that applies according to the methods specified in Table 8 to 40 CFR Part 63 Subpart DDDDD and 40 CFR 63.7540(a)(10) and (13). [40 CFR 63.7540(a)]

        i. The owner or operator must conduct an annual tune-up of each process heater to demonstrate continuous compliance as specified in 40 CFR 63.7540(a)(10)(i) through (vi). The owner or operator must conduct the tune-up while burning the type of fuel that provided the majority of the heat input to the process heater over the 12 months prior to the tune-up. [40 CFR 63.7540(a)(10)]

            a) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the owner or operator may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries

into the storage vessel or process equipment; [40 CFR 63.7540(a)(10)(i)]

b) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available; [40 CFR 63.7540(a)(10)(ii)]

c) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; [40 CFR 63.7540(a)(10)(iv)]

d) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and [40 CFR 63.7540(a)(10)(v)]

e) Maintain on-site and submit, if requested by the Administrator, a report containing the information in 40 CFR 63.7540(a)(10)(vi)(A) through (C), [40 CFR 63.7540(a)(10)(vi)]

i) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the process heater; [40 CFR 63.7540(a)(10)(vi)(A)]

ii) A description of any corrective actions taken as a part of the tune-up; and [40 CFR 63.7540(a)(10)(vi)(B)]

iii) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. [40 CFR 63.7540(a)(10)(vi)(C)]

ii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [40 CFR 63.7540(a)(13)]

4. <u>Monitoring</u>

a. The owner or operator must conduct an annual tune-up according to 40 CFR 63.7540(a)(10). Each annual tune-up specified in 40 CFR 63.7540(a)(10) must be no more than 13 months after the previous tune-up. The first annual tune-up must be no later than 13 months after the initial startup of the affected source. [40 CFR 63.7515(d)]

5. Notification

a. The owner or operator must submit to the Administrator all of the notifications in 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4) and (6), and 40 CFR 63.9(b) through (h) that apply by the dates specified. [40 CFR 63.7545(a)]

b. As specified in 40 CFR 63.9(b)(4) and (5), the owner or operator must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source. [40 CFR 63.7545(c)]

6. Reporting

a. The owner or operator must submit each report in Table 9 to 40 CFR Part 63 Subpart DDDDD that applies. [40 CFR 63.7550(a)]

b. The owner or operator may submit an annual compliance report as specified in 40 CFR 63.7550(b)(1) through (4), instead of a semi-annual compliance report. [40 CFR 63.7550(b)]

c. The owner or operator must submit a compliance report with the information in 40 CFR 63.7550(c)(5)(i) through (iii), (xiv), and (xvii). [40 CFR 63.7550(c)(1)]

d. The owner or operator must submit all reports required by Table 9 of 40 CFR Part 63 Subpart DDDDD electronically to the EPA via CEDRI. [40 CFR 63.7550(h)(3)]

7. Recordkeeping

a. The owner or operator must keep records according to 40 CFR 63.7555(a)(1) and (2). [40 CFR 63.7555(a)]

b. Records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). [40 CFR 63.7560(a)]

c. As specified in 40 CFR 63.10(b)(1), the owner or operator must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.7560(b)]

d. The owner or operator must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The owner or operator can keep the records off site for the remaining 3 years. [40 CFR 63.7560(c)]

N. **The existing process heaters (including EU-FPU-10-1, EU-FPU-10-2, and EU-PLT-6) are subject to the applicable requirements in 40 CFR Part 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. The affected source is the collection of all process heaters within the gas 1 burning process heater subcategory, in**

accordance with 40 CFR 63.7490(a)(1). The process heaters are existing because they have not commenced construction or reconstruction after June 4, 2010, in accordance with 40 CFR 63.7490(d).

1. The owner or operator must meet the requirements in 40 CFR 63.7500(a)(1) and (3). [40 CFR 63.7500(a)]

    1. The owner or operator must meet each emission limit and work practice standard in Table 3 to 40 CFR Part 63 Subpart DDDDD that applies to the process heaters. [40 CFR 63.7500(a)(1)]

    2. At all times, the owner or operator must operate and maintain affected sources (as defined in 40 CFR 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.7500(a)(3)]

2. The owner or operator shall comply with the General Provisions in 40 CFR 63.1 through 40 CFR 63.15, applicable as described in Table 10 to 40 CFR Part 63 Subpart DDDDD. [40 CFR 63.7565]

3. <u>Compliance</u>

    a. The owner or operator must conduct an annual tune-up according to 40 CFR 63.7540(a)(10). Each annual tune-up specified in 40 CFR 63.7540(a)(10) must be no more than 13 months after the previous tune-up. [40 CFR 63.7515(d)]

    b. The owner or operator must demonstrate continuous compliance with each work practice standard in Table 3 to 40 CFR Part 63 Subpart DDDDD that applies according to the methods specified in Table 8 to 40 CFR Part 63 Subpart DDDDD and 40 CFR 63.7540(a)(10) and (13). [40 CFR 63.7540(a)]

        i. The owner or operator must conduct an annual tune-up of each process heater to demonstrate continuous compliance as specified in 40 CFR 63.7540(a)(10)(i) through (vi). The owner or operator must conduct the tune-up while burning the type of fuel that provided the majority of the heat input to the process heater over the 12 months prior to the tune-up. [40 CFR 63.7540(a)(10)]

            a) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the owner or operator may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries

into the storage vessel or process equipment; [40 CFR 63.7540(a)(10)(i)]

b) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available; [40 CFR 63.7540(a)(10)(ii)]

c) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; [40 CFR 63.7540(a)(10)(iv)]

d) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and [40 CFR 63.7540(a)(10)(v)]

e) Maintain on-site and submit, if requested by the Administrator, a report containing the information in 40 CFR 63.7540(a)(10)(vi)(A) through (C), [40 CFR 63.7540(a)(10)(vi)]

i) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the process heater; [40 CFR 63.7540(a)(10)(vi)(A)]

ii) A description of any corrective actions taken as a part of the tune-up; and [40 CFR 63.7540(a)(10)(vi)(B)]

iii) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. [40 CFR 63.7540(a)(10)(vi)(C)]

ii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [40 CFR 63.7540(a)(13)]

4. Reporting

a. The owner or operator must submit each report in Table 9 to 40 CFR Part 63 Subpart DDDDD that applies. [40 CFR 63.7550(a)]

b. The owner or operator may submit an annual compliance report as specified in 40 CFR 63.7550(b)(1) through (4), instead of a semi-annual compliance report. [40 CFR 63.7550(b)]

c. The owner or operator must submit a compliance report with the information in 40 CFR 63.7550(c)(5)(i) through (iii), (xiv), and (xvii). [40 CFR 63.7550(c)(1)]

d. The owner or operator must submit all reports required by Table 9 of 40 CFR Part 63 Subpart DDDDD electronically to the EPA via CEDRI. [40 CFR 63.7550(h)(3)]

5. Recordkeeping

a. The owner or operator must keep records according to 40 CFR 63.7555(a)(1) and (2). [40 CFR 63.7555(a)]

b. Records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). [40 CFR 63.7560(a)]

c. As specified in 40 CFR 63.10(b)(1), the owner or operator must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.7560(b)]

d. The owner or operator must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The owner or operator can keep the records off site for the remaining 3 years. [40 CFR 63.7560(c)]

VI. Notification

A. Notify through the Kansas Environmental Information Management System (KEIMS) using the **BOA Notification – General form** within 30 days of completing the project so that an evaluation can be conducted.[6]

B. If, at any time, the facility's operations exceed the specified limitations (emission limits) in Section V. of this permit, the owner or operator shall:

1. Notify KDHE via the Kansas Environmental Information Management System (KEIMS) of any exceedance of the permit limitations within the first working day following discovery of the exceedance.

2. Submit to KDHE via KEIMS a compliance plan stating those actions being taken by the owner or operator to assure future compliance with the permit limitations or to otherwise bring the stationary source into compliance with the permit. This plan shall be signed by a responsible official and submitted within 60 days of discovering the exceedance. This plan shall clearly state if an application for a construction permit modification shall be

[6] Air Program Field Staff, North Central District Office (NCDO) Salina, KS (785) 515-6706

submitted. Any such application shall be filed within 180 days of discovering the exceedance.

Submitting any or all of these reports does not shield the owner or operator from enforcement action for exceeding the permit limitations or for other violations of the Kansas Air Quality Act or Regulations.

VII. General Provisions

A. This document shall become void if the construction or modification has not commenced within 18 months of the effective date, or if the construction or modification is interrupted for a period of 18 months or longer.

B. A construction permit or approval must be issued by KDHE prior to commencing any construction or modification of equipment or processes which results in potential-to-emit increases equal to or greater than the thresholds specified at K.A.R. 28-19-300.

C. Upon presentation of credentials and other documents as may be required by law, representatives of the KDHE (including authorized contractors of the KDHE) shall be allowed to:

1. enter upon the premises where a regulated facility or activity is located or conducted or where records must be kept under conditions of this document;

2. have access to and copy, at reasonable times, any records that must be kept under conditions of this document;

3. inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this document; and

4. sample or monitor, at reasonable times, for the purposes of assuring compliance with this document or as otherwise authorized by the Secretary of the KDHE, any substances or parameters at any location.

D. The emission unit or stationary source which is the subject of this document shall be operated in compliance with all applicable requirements of the Kansas Air Quality Act and the federal Clean Air Act.

E. This document is subject to periodic review and amendment as deemed necessary to fulfill the intent and purpose of the Kansas Air Quality Statutes and Regulations.

F. This document does not relieve the permittee of the obligation to obtain any approvals, permits, licenses, or documents of sanction which may be required by other federal, state, or local agencies.

G. As applicable, EPA regulations codified in 40 CFR Part 60, 62, and 63 require affected sources to electronically submit performance test reports, notification reports, and periodic reports to EPA through the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI is accessed through the EPA's **Central Data Exchange (CDX)** (*https://cdx.epa.gov/*). If the

reporting form is not available in CEDRI at the time that the report is due, the source must submit the report to the Administrator [address listed in 40 CFR 63.13]:

Kansas Compliance Officer
Air Branch
Enforcement and Compliance Assurance Division
U.S. EPA, Region 7
11201 Renner Blvd.
Lenexa, Kansas 66219

All reports, deviations, malfunctions, and other notifications required to be submitted by this permit shall be submitted through KEIMS at:

http://www.kdheks.gov/bar/keims-BOA.html

Permit Writer

Stephen F. Bartels
Engineering Associate
Air Permitting Section

SFB:
c: NCDO
CSP02990 v1.0