

HUNT REFINING COMPANY-TUSCALOOSA REFINERY

1855 FAIRLAWN ROAD
TUSCALOOSA, TUSCALOOSA COUNTY, AL 35401
FACILITY No.: 413-0007

STATEMENT OF BASIS

The proposed third Title V Major Source Operating Permit (MSOP) renewal modification is issued under the provisions of ADEM Admin. Code r. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Hunt Refining Company was issued the existing MSOP on September 1, 2020 with an expiration date of August 31, 2025, for the Tuscaloosa Refinery located at 1855 Fairlawn Drive, Tuscaloosa, Tuscaloosa County, Alabama. Per ADEM Rule 335-3-16-.12(2), an application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of the permit. The proposed MSOP will expire five (5) years from the date of issuance of the Renewal. The modification application was received on September 11, 2020.

PROJECT DESCRIPTION

On September 11, 2020, the Department received an application from Hunt Refining Company-Tuscaloosa Refinery requesting to change the annual compliance certification (ACC) due date and also requesting to modify the basis of its Anti-PSD limits for the Flexible Hydrotreater Unit. The Department has decided to include in the MSOP the recently issued Air Permit No.: 413-0007-X088 for emergency generator engine No.: 70311 since the MSOP is currently open for modification.

ACC Reporting Period and Submittal Date Modification

Hunt was issued its third Major Source Operating Permit (MSOP) renewal on September 1, 2020. The ACC reporting period and submittal date for the renewal was adjusted based on the issuance date for the renewed permit. However, Hunt has expressed that the adjusted reporting period and submittal date will create a burden on the company because of the numerous reports required to be submitted to the Department by the plant throughout the year.

The current permit requires that Hunt submits two ACCs to the Department for the reporting year 2020. The first 2020 ACC, demonstrating compliance with the permit issued on November 7, 2012 with a modification date of February 14, 2013, was required to be submitted by March 1, 2021. This ACC was required to cover the reporting period from January 1, 2020 through August 31, 2020. The second 2020 ACC, demonstrating compliance with the permit issued on September 1, 2020, is required to be submitted by October 31, 2021. This ACC is required to cover the reporting period from September 1, 2020 through August 31, 2021.

To reduce the burden caused by changing the previous ACC reporting period and due date, Hunt has requested permission to cover the reporting period from September 1, 2020 through December 31, 2020 for the second 2020 ACC. This ACC will be due on or before March 1, 2021. Hunt also proposed that subsequent ACCs covering the period from January 1 of the current year through December 31 of that same year be submitted annually to the Department and EPA Region IV by March 1 of the following year.

Modification to Anti-PSD Limits for the Flexible Hydrotreater Unit

During the Black Warrior Expansion project conducted in 2008, Hunt requested limits on the Naphtha Hydrotreating Unit (currently designated as the Flexible Hydrotreater (FH) Unit) to avoid a Prevention of Significant Deterioration (PSD) review for the project. At the time of the expansion, Hunt had the option to limit either the annual throughput of the total feed to the unit in barrels of oil per day (BOPD) or to limit the annual firing rate (heat input) on the unit’s heaters (currently designated as the FH Charge heater (HS-201) and the FH Reboiler heater (HS-202)). Hunt elected to limit the annual total feed throughput to less than 8,400 BOPD based on historical data from 2005 and 2006. Hunt was unable to provide any background information regarding why one option was chosen over the at the time.

Currently, Hunt’s records indicate that they are approaching their 12-month average throughput limit even though only one heater has been in operation over the 12-month averaging period from September 2019 through August 2020. The 12-month average for this period was 7,433 BOPD. Hunt has now requested to establish Anti-PSD limits for the FH Unit’s heaters based on the annual averaged firing rate of 21.2 million British thermal units per hour (MMBtu/hr).

Addition of Air Permit No.: 413-0007-X088 Requirements in MSOP

Hunt installed the 14.75 HP, Generac G0070311, liquefied propane gas (LPG) fired, emergency generator engine (designated as Engine No. 70311) at the plant in 2019. An application for the engine was not submitted to the Department prior to the installation of the engine at the plant’s West Gate for operation of the guard house and security gates during emergency power outages. The Department has recently determined that all new emission sources at a Title V facility are required to be permitted.

EMISSIONS

To demonstrate that neither the throughput or the firing rate would have resulted in an increase in emissions above de-minimis levels during the expansion project, Hunt provided historical past actual data of the annual average firing rates for each heater in 2005 and 2006. This was the same averaging period used to establish the Anti-PSD annual average throughput limit of 8,400 BOPD.

	2008 Expansion Average Firing Rate (MMBtu/hr)	
	HS-201	HS-202
2005	8.39	9.75
2006	10.37	13.86
Average	9.38	11.81
Total Average	21.2	

Currently, Hunt is only operating one of the two process heaters. Based on the annual average firing rating during the period covering September 2019 through August 2020, the actual annual average firing rate was 8.5 MMBtu/hr. According to Hunt, both heaters will only fire when the unit is in gas oil service (during a Hydrocracker turnaround). During the 2019 Hydrocracker turnaround when the unit was in gas oil service, the average combined firing rate for the two heaters was 13.7 MMBtu/hr. A maximum annual combined average firing rate of 14.8 MMBtu/hr has been recorded since the Hydrocracker Unit (added as part of the Expansion Project) went into service in 2010. Provided that the annual average firing rate during the

period covering September 2019 through August 2020 was limited to 21.2 MMBtu/hr, the Anti-PSD limit would not be at risk of being exceeded with this limit modification.

The Department requested that Hunt provide historical data of actual average emissions reported for the HS-201 and HS-202 heaters in 2005 and 2006. The data was used to demonstrate if changing from a throughput limit to a firing rate limit would cause an exceedance of the amount of pollutants emitted at the time of the expansion project. Historical emissions were compared to the actual emissions reported for the 12-month averaging period from September 2019 through August 2020. Based on this comparison, it does not appear that changing the basis of the limit would increase actual emissions above the level determined during the 2008 expansion project.

Averaging Periods	Actual Average Heater Emissions (tons/year)				
	PM	SO ₂	NO _x	VOC	CO
2 yr-Average (2005 and 2006)	0.658	0.928	8.66	0.486	7.28
Sep 2019-Aug 2020	0.276	0.086	3.628	0.200	3.047

REGULATIONS

Applicability:

ADEM Admin. Code r. 335-3-14-.04 *“Prevention of Significant Deterioration (PSD) Permitting”*

At the request of the facility the Flexible Hydrotreating Unit’s Anti-PSD Limits would change from being based on the annual average throughput of the feed going to the FH Unit to being based on the annual average firing rate for process heaters Nos.: HS-201 and HS-202. Based on historical data from 2005 and 2006, the modified limits would not have been expected to exceed de-minimus levels for sulfur dioxide (SO₂) emissions. Therefore, the annual average firing rating for both heaters shall not exceed 21.2 MMBtu/hr. Records of the monthly and annual average firing rates will be used to demonstrate that the Anti-PSD limit has not been exceeded. Provided that the limit is exceeded, a deviation must be reported to the Department within 48 hours or 2 working days of the deviation’s occurrence.

Applicability:

ADEM Admin. Code r. 335-3-16-.03, *“Major Source Operating Permits” (MSOP)*

The Flexible Hydrotreating Unit’s process heaters Nos.: HS-201 and HS-202 would remain subject the requirements of this regulation since they are located at a major source facility. To comply with the requirements of this regulation the facility is required to monitor and record the hours of operation, fuel gas consumption, and monthly average firing rate (MMBtu/hr), 12-month annual average firing rate (MMBtu/12-month averaging period) and emissions from each unit. Periodic monitoring reports (PMR) are required to be submitted semi-annually to report deviations from the permit requirements for each unit. The report shall be submitted with 60 days of the end of the reporting period. The requirements to maintain a record of the annual average throughput (BOPD) will no longer be required for the process heaters.

RECOMMENDATIONS

Based on the information provided regarding changes to the ACC reporting period and due date, I would recommend that the Department grant Hunt permission to cover the reporting period from September 1, 2020 through December 31, 2020 for the second 2020 ACC. This ACC will be due on or before March 1, 2021. Subsequent ACCs covering the period from January 1 of the current year through December 31 of that same year shall be submitted annually to the Department and EPA Region IV by March 1 of the following year.

Based on the historical data provided regarding the Flexible Hydrotreating Unit's Anti-PSD Limit, it does not appear that any state or federal regulations would not be met if the requested modifications were made. I recommend that Hunt is allowed to modify its Anti-PSD limit from the annual average throughput feed rate of 8,400 BOPD to an annual average firing rate of 21.2 MMBtu/hr for the HS-201 and HS-202 process heaters.

The following sections of the current permit will be changed as a result of this permit modification (see Attachment A) and inclusion of the engine 14.75 HP emergency into the MSOP:

- Permit Transmittal Cover letter will be revised to indicate the new ACC reporting periods and to revise the due date for all subsequent ACC submittals
- Cover page will be modified to include the modification date
- General Provisos page 1 will be modified
- Pre-Black Warrior Expansion Units: Process Heaters and Boilers section of the permit on pages 19, 21, 23, 28, 32, and 33 will be modified
- Emergency Engines section of the permit on pages 55, 58, 59, 61, and 65-67 will be modified to include the new engine.

Pending the 30-day public comment period and 45-day EPA review period, I recommend issuance of this significant modification for the third renewal permit.

Harlotte M. Bolden-Wright
Industrial Minerals Section
Energy Branch
Air Division

October 28, 2020
Draft Date

ATTACHMENT A: MODIFIED PROVISOS

DRAFT



MAJOR SOURCE OPERATING PERMIT

PERMITTEE: Hunt Refining Company
FACILITY NAME: Tuscaloosa Petroleum Refinery
FACILITY/PERMIT NO.: 413-0007
LOCATION: 1855 Fairlawn Drive,
Tuscaloosa, Tuscaloosa County, Alabama

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, as amended, Ala. Code 1975, §§22-28-1 to 22-28-23 (2006 Rplc. Vol. and 2007 Cum. Supp.) (the "AAPCA") and the Alabama Environmental Management Act, as amended, Ala. Code 1975, §§22-22A-1 to 22-22A-15, (2006 Rplc. Vol. and 2007 Cum. Supp.) and rules and regulations adopted thereunder, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

*Pursuant to the **Clean Air Act of 1990**, all conditions of this permit are federally enforceable by EPA, the Alabama Department of Environmental Management, and citizens in general. Those provisions which are not required under the **Clean Air Act of 1990** are considered to be state permit provisions and are not federally enforceable by EPA and citizens in general. Those provisions are contained in separate sections of this permit.*

Issuance Date: September 1, 2020

Modification Date: ???
DRAFT 12/7/2020

Expiration Date: August 31, 2025

General Permit Provisos

Federally Enforceable Provisos	Regulations
<p>(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements.</p>	
<p>11. <u>Compliance Provisions</u></p> <p>(a) The permittee shall continue to comply with the applicable requirements with which the company has certified that it is already in compliance.</p> <p>(b) The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit.</p>	<p>Rule 335-3-16-.07(c)</p>
<p>12. <u>Compliance Certification</u></p> <p>On, or before, October 31st March 1st, an annual compliance certification shall be submitted.</p> <p>(a) The compliance certification shall include the following:</p> <p style="margin-left: 40px;">(1) The identification of each term or condition of this permit that is the basis of the certification;</p> <p style="margin-left: 40px;">(2) The compliance status;</p> <p style="margin-left: 40px;">(3) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);</p> <p style="margin-left: 40px;">(4) Whether compliance has been continuous or intermittent;</p> <p style="margin-left: 40px;">(5) Such other facts as the Department may require to determine the compliance status of the source;</p> <p>(b) The compliance certification shall be submitted to:</p> <p style="margin-left: 80px;">Alabama Department of Environmental Management Air Division P.O. Box 301463 Montgomery, AL 36130-1463 and to:</p> <p style="margin-left: 80px;">Director, Air Enforcement and Toxics Branch EPA Region 4 61 Forsyth Street, SW Atlanta, GA 30303</p>	<p>Rule 335-3-16-.07(e)</p>

EMISSION POINT	DESCRIPTION	POLLUTANT	EMISSION LIMIT *	REGULATIONS
COKE PULVERIZING UNIT:				
FRN-22970	9.50 MMBTU/Hour Pulverizer Dryer Heater	PM ₁₀	4.87 Lb/Hour	Rule 335-3-4-.03(1)
		NO _x	3.14 Lb/Hour	Rule 335-3-14-.04 [Anti-PSD Limit]
NAPHTHA HYDROBON UNIT:				
HS-601	16.5 MMBTU/Hour Naphtha Hydrobon Charge Heater	PM ₁₀	6.63 Lb/Hour	Rule 335-3-4-.03(1)
HS-602	13.9 MMBTU/Hour Naphtha Hydrobon Stripper Reboiler Heater	PM ₁₀	6.03 Lb/Hour	Rule 335-3-4-.03(1)
FLEXIBLE HYDROTREATER UNIT [FEEDRATE LIMITED TO 8,400 BBL/DAY (RULE 335-3-14-.04) [ANTI-PSD LIMIT]] [TOTAL FIRING RATE LIMITED TO 21.2 MMBTU/HR OVER 12 MONTH PERIOD [SO₂ ANTI-PSD LIMIT]]				
HS-201	29.1 MMBTU/Hour Naphtha Hydrotreater Charge Heater	PM ₁₀	9.11 Lb/Hour	Rule 335-3-4-.03(1)
HS-202	14.6 MMBTU/Hour Naphtha Hydrotreater Reboiler Heater	PM ₁₀	6.19 Lb/Hour	Rule 335-3-4-.03(1)
HYDROGEN PLANT NO. 1				
THREE (3) REFORMER HEATERS W/COMMON STACK				
HS-2401A	42.06 MMBTU/Hour Hydrogen Plant Reformer A	PM ₁₀	20.1 Lb/Hour	Rule 335-3-4-.03(1)
		NO _x	4.42 Lb/Hour	Rule 335-3-14-.04 [Anti-PSD Limit]
HS-2401B	42.06 MMBTU/Hour Hydrogen Plant Reformer B			
HS-2401C	42.06 MMBTU/Hour Hydrogen Plant Reformer C			
ISOMERIZATION UNIT:				
HS-104	12.9 MMBTU/Hour Stabilizer Reboiler Heater	PM ₁₀	5.78 Lb/Hour	Rule 335-3-4-.03(1)
DIESEL HYDROTREATING UNIT [DHT] [TOTAL FIRING RATE LIMITED TO 34.9 MMBTU/HR OVER 12 MONTH PERIOD [ANTI-PSD LIMIT]]				
TWO (2) HEATERS W/COMMON STACK				
H-700	26.17 MMBTU/Hour DHT Charge Heater	PM ₁₀	10.1 Lb/Hour	Rule 335-3-4-.03(1)
		NO _x	7.8 Lb/Hour	Rule 335-3-14-.04 [Anti-PSD Limit]
H-701	38.83 MMBTU/Hour DHT Fractionator Reboiler Heater			

Provisos for Pre-Black Warrior Expansion Units: Process Heaters & Boilers

Federally Enforceable Provisos	Regulations
Applicability	
1. Each process heater and boiler on the summary page of this subpart shall be subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01, “Visible Emissions”, and the requirements specified in this subpart of this permit, except as specified.	Rule 335-3-4-.01
2. Each process heater and boiler on the summary page of this subpart shall be subject to the requirements of ADEM Admin. Code r. 335-3-4-.03, “Fuel Burning Equipment” for Control of Particulate Emissions and the requirements specified in this subpart of this permit.	Rule 335-3-4-.03(1)(a)
3. The Flexible Hydrotreater Unit, process heater Nos.: HS-201, HS-202, HS-2041A, HS-2041B, HS-2041C, H-700, H-701, FRN-22970, BA-601M, BA-602M and boiler No. B-06 each have limits in place in order to avoid a review under ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration (PSD)]”, and are subject to the requirements specified in this subpart of this permit.	Rule 335-3-14-.04 [Anti-PSD Limit]
4. Process heaters: BA-601M and BA-602M have best available control technology (BACT) limits in place to comply with the requirements specified in ADEM Admin. Code r. 335-3-14, “Prevention of Significant Deterioration (PSD)”, and the requirements specified in this subpart of this permit.	Rule 335-3-14-.04(8)(a) & (b) Rule 335-3-14-.04(9)(b) [PSD/BACT Limit]
5. Each boiler and process heater on the summary page of this subpart shall be subject to the requirements specified in ADEM Admin. Code r. 335-3-16-.03, “Major Source Operating Permits”, and the requirements specified in this subpart of this permit.	Rule 335-3-16-.03
6. Boiler No. B-06 shall be subject to the requirements specified in 40 CFR Part 60, Subpart A, “General Provisions”, 40 CFR 60 Subpart Dc, “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units”, and the requirements specified in this subpart of this permit.	Rule 335-10-.02(2)(c) §60.40c(a), (h)
7. Each process heater and boiler on the summary page of this subpart shall be subject to the requirements specified in 40 CFR Part 60, Subpart A, “General Provisions”, 40 CFR Part 60, Subpart J, “Standards of Performance for Petroleum Refineries” [NSPS J], and the requirements specified in this subpart of this permit.	40 CFR 60 Subpart A 40 CFR 60 Subpart J Rule 335-3-16-.05(a)
8. Each boiler and process heater listed on the summary page of this subpart, except units: T-14, T-33 and T-50 and reformer heaters: HS-2401A, B, and C, shall be subject to the requirements specified in 40 CFR Part 63, Subpart A “General Provisions”, 40 CFR 63 Subpart DDDDD,	§63.7485, §63.7490(a)(1),(d) §63.7491(i) §63.7499(p) §63.7565

Provisos for Pre-Black Warrior Expansion Units: Process Heaters & Boilers

Federally Enforceable Provisos	Regulations
(g) For process heater HS-601, PM ₁₀ emissions shall be maintained at less than, or equal to, 6.63 Lb/hr.	
(h) For process heater HS-602, PM ₁₀ emissions shall be maintained at less than, or equal to, 6.03 Lb/hr.	
(i) For process heater H-H1, PM ₁₀ emissions shall be maintained at less than, or equal to, 5.74 Lb/hr.	
(j) For process heater H-H2, PM ₁₀ emissions shall be maintained at less than, or equal to, 5.38 Lb/hr.	
(k) For process heater HRC-039, PM ₁₀ emissions shall be maintained at less than, or equal to, 4.37 Lb/hr.	
(l) For process heater P-H1, PM ₁₀ emissions shall be maintained at less than, or equal to, 3.44 Lb/hr.	
(m) For process heater P-H2, PM ₁₀ emissions shall be maintained at less than, or equal to, 2.77 Lb/hr.	
(n) For process heater H-502, PM ₁₀ emissions shall be maintained at less than, or equal to, 8.93 Lb/hr.	
(o) For process heater P-H3B, PM ₁₀ emissions shall be maintained at less than, or equal to, 4.40 Lb/hr.	
(p) For process heater P-H3C, PM ₁₀ emissions shall be maintained at less than, or equal to, 1.24 Lb/hr.	
(q) For boilers: B-01, B-02, and B-03, PM ₁₀ emissions for each boiler shall each be maintained at less than, or equal to, 10.4 Lb/hr.	
(r) For process heater HS-104, PM ₁₀ emissions shall be maintained at less than, or equal to, 5.78 Lb/hr.	
3. The total feed to the 12-month average firing rate for the Flexible Hydrotreater Unit process heaters Nos.: HS-201 and the HS-202 shall not exceed 8,400 BBL/Day 21.2 MMBtu/hr.	Rule 335-3-14-.04 [Anti-PSD Limit]
4. Process heaters BA-601M and BA-602M shall be subject to the following requirements:	
(a) Each process heater shall not combust fuel gas that contains hydrogen sulfide (H ₂ S) in excess of:	

Provisos for Pre-Black Warrior Expansion Units: Process Heaters & Boilers

Federally Enforceable Provisos	Regulations
<i>Emission Monitoring</i>	
<p>1. Provided that visible emissions in excess of the opacity standards occur on a unit, a visible emissions observation must be conducted to determine opacity or to determine presence of fugitive emissions from the unit.</p>	<p>Rule 335-3-4-.01(2) Rule 335-3-16-.05(c)(1)(i)</p>
<p>2. The following requirements shall be met for performance testing conducted on process heaters: H-700, H-701, BA-601M, BA-602M, H-501, on the common stack for HS-2041A, B, C and on boilers: B-04 and B-06:</p> <p>(a) Test for NO_x emissions once every five (5) years in accordance with the <i>Heating Units Subject to NO_x Testing</i> section found in Appendix A of this permit.</p> <p>(b) A test shall consist of three runs of at least 1-hour in duration each.</p> <p>(c) The results of performance tests shall be submitted to the Department within 30 days of the test date.</p> <p>(d) The pollutant tested for may be modified upon receiving Departmental approval.</p> <p>(e) Emission factors (EF) for each air pollutant shall be determined in pounds per million BTU.</p> <p style="text-align: right;">[Test EF (Lb/MMBTU)]</p>	<p>Rule 335-3-16-.05(c)(1)(i) Rule 335-3-14-.04 [BACT & Anti-PSD Limits]</p>
<p>3. Process heater H-501X shall be equipped with a NO_x CEMS.</p> <p>(a) The CEMS shall be monitored in accordance with the <i>Heating Units with NO_x CEMS</i> section found in Appendix A of this permit.</p> <p>(b) In lieu of the requirements of 40 CFR Part 60, Appendix F, §§5.1.1, 5.1.3, and 5.1.4, either a Relative Accuracy Audit (RAA) or a Relative Accuracy Test Audit (RATA) must be conducted on the CEMS at least once every three (3) years.</p> <p>(c) A cylinder gas audit (CGA) must be conducted each calendar quarter during which a RAA or a RATA is not performed.</p>	<p>Rule 335-3-16-.05(a) Rule 335-3-16-.05(c)(1)(ii)</p>
<p>4. The feedrate limit and the firing rate limits for process heaters Nos.: H-700 & H-701, H-501, HS-201 & HS-202, and BA-602M shall be demonstrated through monthly calculations.</p>	<p>Rule 335-3-16-.05(c)(1)(ii) Rule 335-3-14-.04 [BACT & Anti-PSD Limits]</p>

Provisos for Pre-Black Warrior Expansion Units: Process Heaters & Boilers

Federally Enforceable Provisos	Regulations
<p style="margin-left: 40px;">(ii) For all other units, [Test emission factors (Lb/MMBTU)] shall be either AP-42 emissions factors, or manufacturer’s emission factors.</p> <p>(2) Unit Emissions (Lb/Hour) =</p> $\frac{\text{[Unit Emissions (Lb/Month)]}}{\text{[Unit Hours (Hours/Month)]}}$	
<p>(k) For the common stack for process heater Nos.: H-700 & H-701 and HS-201 & HS-202, and process heater Nos.: H-501 and BA-602M:</p> <p>(1) Process Unit Operating hours</p> <p style="margin-left: 100px;">[Process Hours (Hours/Month)]</p> <p>(2) Monthly Average Firing Rate [MMBTU/hr] =</p> $\frac{\text{[Unit Heat Input (MMBTU/Month)]}}{\text{[Process Hours (Hours/Month)]}}$ <p>(3) Total Annual Firing Rate [MMBTU/hr] =</p> <p>Monthly Average Firing Rate [MMBTU/hr] + \sum previous 11-months Average Firing Rate [MMBTU/hr]</p> <p>(4) Annual Average Firing Rate [MMBTU/hr] =</p> $\frac{\text{Total Annual Firing Rate [MMBTU/hr]}}{\text{12-Months}}$	<p>Rule 335-3-16-.05(c)(2) Rule 335-3-14-.04 [BACT & Anti-PSD Limits]</p>
<p>(l) For the Naphtha Hydrotreating [NH] Unit:</p> <p>(1) Naphtha Processed</p> <p style="margin-left: 100px;">[BBL/Month]</p> <p>(2) NH Operating Time</p> <p style="margin-left: 100px;">[Days/Month]</p> <p>(3) Daily Average Naphtha Processed [BBL/Day] =</p> $\frac{\text{Naphtha Processed [BBL/Month]}}{\text{NH Operating Time [Days/Month]}}$ <p>(4) Total Naphtha Processed [BBL/Day] =</p> <p>Daily Average Naphtha Processed [BBL/Day] + \sum previous 11-months Daily Average Naphtha Processed [BBL/Day]</p>	<p>Rule 335-3-16-.05(c)(2) Rule 335-3-14-.04 [Anti-PSD Limit]</p>

Provisos for Pre-Black Warrior Expansion Units: Process Heaters & Boilers

Federally Enforceable Provisos	Regulations						
<p>(5) $\frac{\text{Total Average Naphtha Processed [BBL/Day]} \times 365}{\text{Total Naphtha Processed [BBL/Day]} \times 12 \text{ Months}}$</p>							
<p>(m) A copy of the NO_x CEMS monitoring record for process heater H-501X shall be maintained onsite in a form suitable for inspection.</p>	Rule 335-3-16-.05(c)(2)						
<p>(n) A record of each visible emission observation conducted on a unit.</p>	Rule 335-3-16-.05(c)(2)						
<p>2. To demonstrate compliance with NSPS J, the following reporting requirements shall be met:</p>	Rule 335-3-16-.05(c)(2)						
<p>(a) An excess emissions report and/or summary report shall be submitted semi-annually on the following reporting schedule:</p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>Reporting Period</u></th> <th style="text-align: center;"><u>Submittal Date</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">January 1-June 30</td> <td style="text-align: center;">August 28</td> </tr> <tr> <td style="text-align: center;">July 1 - December 31</td> <td style="text-align: center;">February 28</td> </tr> </tbody> </table>	<u>Reporting Period</u>	<u>Submittal Date</u>	January 1-June 30	August 28	July 1 - December 31	February 28	§60.7(c), (d), §60.19(d), (e)
<u>Reporting Period</u>	<u>Submittal Date</u>						
January 1-June 30	August 28						
July 1 - December 31	February 28						
<p>(b) The excess emission report shall include each rolling 3-hr period during which the average H₂S concentration in the fuel gas (measured using the continuous H₂S monitor) exceeds its allowable.</p>	§60.105(e)(3)(ii)						
<p>(c) The information specified in §60.7(c) of Subpart A and §60.107(g) of NSPS J shall be provided in each excess emissions report.</p>	§60.105(e) §60.107(g)						
<p>3. To demonstrate compliance with the Boiler MACT, the following requirements shall be met:</p>							
<p>(a) The following notifications shall be submitted:</p>	§63.7545						
<p>(1) Notifications specified in §63.7545(a) of the Boiler MACT</p>	§63.7545(a)						
<p>(2) Notification of alternative fuel usage during periods of natural gas curtailment or supply interruption shall be submitted within forty-eight (48) hours of the declaration of such period</p>	§63.7545(f)						
<p>(b) The following records shall be maintained:</p>	§63.7555						
<p>(1) A copy of each notification and report to comply with this subpart according to §63.10(b)(2)(xiv) of Subpart A</p>	§63.7555(a)(1)						
<p>(2) Records of compliance demonstrations as required by §63.10(b)(2)(viii) of Subpart A</p>	§63.7555(a)(2)						

Permitted Operating Schedule/Unit:

Emergency Operating Schedule Unlimited [40 CFR §60.4243(d)(1)]
 Maintenance and Testing Operating Schedule: 100 hours/yr-Non-Emergency Hours per year [40 CFR §60.4243(d)(2)]
 Non-Emergency Operating Schedule: ≤ 50 Hours per year [40 CFR §60.4243(d)(3)]

Emission Limitations:

EMISSION POINT	DESCRIPTION	POLLUTANT	EMISSION LIMIT	REGULATIONS
40 CFR 60 Subpart JJJJ [NSPS JJJJ] SPARK IGNITION EMERGENCY ENGINES ≤ 500 BHP:				
US-ME-3249	402 BHP BHP , Generac SG300, Four stroke rich burn (4SRB), Natural Gas-Fired Backup Emergency Electrical Generator Engine w/catalytic converter	NO _x	1.77 Lb/hr [2.0 g/HP-hr]	§60.4233(e), Table 1 Rule 335-3-14-.04 [Anti-PSD Limit]
		CO	3.54 Lb/hr [4.0 g/HP-hr]	
		VOC	0.89 Lb/hr [1.0 g/HP-hr]	
SC-OPS-SG150	230.3 BHP, Generac SG150, 4SRB, Natural Gas-Fired, OPS Shelter emergency generator engine	NO _x	2.0 g/HP-hr	§60.4233(e), Table 1
		CO	4.0 g/HP-hr	
		VOC	1.0 g/HP-hr	
70311	14.75 BHP, Generac, G0070311, Liquefied Propane Gas (LPG) fired, West Gate Guard House and Security Gate emergency generator engine.	Hydrocarbons (HC) +NO _x	8.0 g/kW-hr [5.97 g/HP-hr]	§60.4231(a), §60.4233(a), Table 1 [NSPS JJJJ] §1054.105(a)
CO	610 g/kW-hr [455.22 g/HP-hr]			
EACH EMERGENCY ENGINE LISTED ABOVE		Opacity	No more than one 6 min avg > 20%	Rule 335-3-4-.01(1)(a)
			OR	
			No 6 min avg. > 40% in any sixty (60) minute period	Rule 335-3-4-.01(1)(b)

Provisos for Emergency Engines

Federally Enforceable Provisos	Regulations
<i>Applicability</i>	
1. Each emergency engine, except the UE-P-100A and B engines, is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01, “Visible Emissions” for Control of Particulate Emissions and to the requirements of this subpart of this permit.	Rule 335-3-4-.01(1)(a) and (b)
2. Engine Nos.: US-E-P-100A, US-E-P-100B, and US-ME-3249., are subject to an emission limits limit in order to avoid a review under ADEM Admin. Code r. 335-3-14-.04, “Air Permits Authorizing Construction in Clean Areas [Prevention of Significant Deterioration (PSD)]”, and they are subject to the requirements specified in this subpart of this permit. Compliance with emission limits under 40 CFR 60 Subpart IIII, demonstrate compliance with the subpart.	Rule 335-3-14-.04 [Anti-PSD Limit]
3. Each emergency engine on the summary page of this subpart shall be subject to the requirements specified in ADEM Admin. Code r. 335-3-16-.03, “Major Source Operating Permits”, and the requirements specified in this subpart of this permit.	Rule 335-3-16-.03
4. The following engines are subject to the requirements of 40 CFR 60 Subpart IIII, “Standards of Performance for Compression Ignition (CI) Internal Combustion Engines” [NSPS IIII] and to the requirements of this subpart of this permit: Engine Nos. US-E-P-100A, US-E-P-100B, and US-ME-3249X.	§60.4200(a)(2)(i) [Non-Fire Pump] §60.4200(a)(2)(ii) [Fire Pump] §60.4200(a)(4), §60.4208 §63.6590(b)(1)(i)
5. The following engines are subject to the requirements of 40 CFR 60, Subpart JJJJ, “Standards of Performance for Stationary Spark Ignition Internal Combustion Engines” [NSPS JJJJ] and to the requirements of this subpart of this permit: Engine Nos. US-ME-3249, SC-OPS-SG150, and 70311.	§60.4230(a)(4)(iii) §60.4230(a)(4)(iv) §63.6590(c)(6)
6. Engine No. 70311 is subject to the applicable requirements under §1054, “Control of Emissions from New. Small Nonroad Spark-Ignition Engines and Equipment” as referenced in NSPS JJJJ.	§60.4231(a), §60.4233(a) §1054
7. The following engines are subject to the major source requirements of 40 CFR 63 Subpart ZZZZ, “National Emission Standards for Hazardous Air Pollutants (HAPs) for Stationary Reciprocating Internal Combustion Engines (RICE)” [MACT ZZZZ, RICE MACT] and to the requirements of this subpart of this permit: Engine Nos. 00439, 00680, 10317, 20214, and 00649.	§63.6580 §63.6585(a),(b) §63.6590(a)(1)(ii), (b)(1)(i),(b)(3)(iii) §63.6645(f)
(a) The following engines are subject only to the limited requirements under this subpart as specified in	§63.6590(b)(1)(i)

Provisos for Emergency Engines

Federally Enforceable Provisos	Regulations
<p>§63.6645(f): Engine Nos. US-E-P-100A, US-E-P-100B, and US-ME-3249X.</p>	
<p>(b) Engines No.: SC-OPS-SG150, US-ME-3249, and 70311 satisfies the requirements of MACT ZZZZ by complying with NSPS JJJJ. No further requirements apply under this subpart.</p>	<p>§63.6590(a)(2)(ii) §63.6590(c)(6)</p>
<p>(c) Engine No. 00445 is exempt from the requirements of this subpart provided that it meets the requirements specified in §63.6590(b)(3)(iii).</p>	<p>§63.6590(b)(3)(iii)</p>
<p>8. Each engine is subject to the applicable requirements of 40 CFR 60, Subpart A “<i>General Provisions</i>”, and 40 CFR 63 Subpart A, “<i>General Provisions</i>” as specified in the applicable subparts and to the requirements of this subpart of this permit.</p>	<p>§60.4218, Table 8, NSPS IIII §60.4246, Table 3, NSPS JJJJ §63.6665, Table 8, RICE MACT §63.6590(b)(3)</p>
<p><i>Emission Standards</i></p>	
<p>1. The emergency engines must comply with the following opacity standards and/or smoke emission standards</p>	
<p>(a) For each engine, the following opacity standards specified below shall be met</p>	
<p>(1) The engine shall not discharge into the atmosphere particulate that results in an opacity greater than 20%, as determined by a 6-minute average.</p>	<p>Rule 335-3-4-.01(1)(a)</p>
<p>(2) Except for one 6-minute period during any 60-minute period, the engine shall not discharge into the atmosphere particulate that results in an opacity greater than 40%.</p>	<p>Rule 335-3-4-.01(1)(b)</p>
<p>(b) For Engine No.: US-ME-3249X, the following smoke emission standards specified in §89.113 shall be met during the specified periods found below and during all other periods the requirements specified in proviso 1(a) of this section of the permit shall be met:</p>	<p>§60.4202(a)(2) §60.4205(b) §60.4211(a)(3) §89.113(a)</p>
<p>(1) Acceleration mode, opacity shall not exceed 20 percent (%)</p>	<p>§89.113(a)(1)</p>
<p>(2) Lugging mode, opacity shall not exceed 15%</p>	<p>§89.113(a)(2)</p>

Provisos for Emergency Engines

Federally Enforceable Provisos	Regulations
<ul style="list-style-type: none"> (1) Maximum sulfur content of 15 ppm (2) Minimum cetane index of 40 or maximum aromatic content of 35 volume percent 	<ul style="list-style-type: none"> §80.510(b)(1) §80.510(b)(2)(i) or (ii)
<p>3. To comply with the requirements of NSPS JJJJ and/or Anti-PSD Limits (where applicable), the following emissions standards shall be met:</p> <ul style="list-style-type: none"> (a) <i>Engine No. US-ME-3249</i> shall adhere to the following requirements: <ul style="list-style-type: none"> (1) NO_x emissions shall not exceed 1.77 Lb/hr [2.0 g/HP-hr]. (2) Carbon Monoxide (CO) emissions shall not exceed 3.54 Lb/hr [4.0 g/HP-hr]. (3) VOC emissions (not including formaldehyde emissions) shall not exceed 0.89 Lb/hr [1.0 g/HP-hr]. (4) Shall be equipped with a catalytic converter (b) <i>Engine No. SC-OPS-SG150</i> shall adhere to the following emission limitations the entire life of the engine: <ul style="list-style-type: none"> (1) NO_x emissions shall not exceed 2.0 g/HP-hr. (2) CO emissions shall not exceed 4.0 g/HP-hr. (3) VOC emissions shall not exceed 1.0 g/HP-hr. (c) <i>Engine No. 70311</i> shall adhere to the following emission limitations the entire life of the engine: <ul style="list-style-type: none"> (1) Hydrocarbon (HC) plus NO_x emissions shall not exceed 8.0 grams per kilowatt hour (g/kW-hr) [5.97 g/HP-hr]. (2) CO emissions shall not exceed 610 g/kW-hr [455.22 g/HP-hr]. (3) The applicable requirements specified in 40 CFR part 1068, subparts A through D shall be met. 	<ul style="list-style-type: none"> §60.4233(e), Table 1 §60.4234 §60.4233(e), Table 1 §60.4234 §60.4233(e), Table 1 §60.4234 Rule 335-3-14-.04 [Anti-PSD Limit] §60.4233(e), Table 1 §60.4234 §60.4231(a), §60.4233(a) §1054.105(a) §60.4234 §60.4231(a), §60.4233(a) §1054.105(a) §60.4234 §60.4243(a)(1)

Provisos for Emergency Engines

Federally Enforceable Provisos	Regulations
<p>(5) To determine VOC emissions in engine exhaust, Methods 25A and 18 of 40 CFR 60, Appendix A, Method 25A with the use of a hydrocarbon cutter as described in 40 CFR 1065.265, Method 18 of 40 CFR 60, Appendix, Method 320 of 40 CFR 63, Appendix A, OR ASTM Method D6348-03.</p>	
<p>(c) When calculating emissions of VOC, emissions of formaldehyde should not be included.</p>	<p>§60.4244(f)</p>
<p><i>Emission Monitoring</i></p>	
<p>1. Provided that visible emissions, in excess of the opacity standards, are observed from an engine at any time that the unit is operating, a visible emission observation shall be conducted utilizing one the specified methods.</p>	<p>Rule 335-3-4-.01(2) Rule 335-3-16-.05(c)(1)(i)</p>
<p>2. If an emergency engine does not meet the standards applicable to non-emergency engines, a non-resettable hour meter shall be installed on each engine.</p>	<p>§60.4209(a), §60.4214(b) §60.4237 §63.6625(f)</p>
<p>3. The catalytic converter installed on Engine No. US-ME-3249 must meet the following requirements:</p> <p>(a) Must be maintained and operated in a manner so as to minimize the emissions of regulated air pollutants</p> <p>(b) Shall not be operated without the entire gas stream passing through the catalytic converter</p> <p>(c) Air-to-fuel ratio controllers must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times</p>	<p>Rule 335-3-14-.04 [Anti-PSD Limit] §60.4243(g)</p>
<p>4. For engines subject to the requirements of NSPS IIII (Engine Nos.: UE-P-100A, UE-P-100B, and US-ME-3249X) or NSPS JJJJ (Engine No.: SG-OPS-SG150, US-ME-3249, and 70311), compliance with the applicable emissions standards shall be determined by meeting one of the following monitoring requirements:</p>	
<p>(a) Operate and maintain the unit according to manufacturer's specifications for the life of the unit.</p>	<p><u>For NSPS IIII Engines:</u> §60.4206, §60.4211(a)(3)</p> <p><u>For NSPS JJJJ Engines:</u> §60.4248, §60.4243(a)(1), (b)(1), (d)</p>

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Federally Enforceable Provisos	Regulations
<p>(b) Performance testing on NSPS III engines shall be conducted only if the engine meets the requirements specified in §60.4211(g).</p>	<p>§60.4211(g) and (g)(3), §60.4212</p>
<p>(c) Performance testing on NSPS JJJ engines shall be conducted only if the engines are rebuilt (as defined in §94.11(a)) or if an engine undergoes major repair or maintenance.</p>	<p><u>For NSPS JJJ Engines:</u> §60.4243(a)(2), (b)(2) §60.4244, §60.4245(d) and (f)</p>
<p>5. For engines subject to the requirements of MACT ZZZZ (Engine Nos.: 00439, 00680, 10317, 20217, and 00649), one of the following operations and maintenance plans outlined in Table No. 6, No. 9 shall be complied with:</p> <p>(a) Operate and maintain the stationary engine according to the manufacturer’s emission-related operation and maintenance instructions</p> <p>(b) The facility may develop and follow its own maintenance plan, provided this plan ensures, to the extent practicable, the operation and maintenance of the unit in a manner consistent with good air pollution practices.</p>	<p>Rule 335-3-16-.05(c)(1) §63.6640(a) §63.6625(e)(3)</p>
<p><i>Recordkeeping and Reporting Requirements</i></p>	
<p>1. A record of the information specified in provisos 1(a) through (i) of this section of this subpart shall be maintained and made available in a form suitable for inspection for a period of five (5) years or as specified in the applicable subpart of §60.7(f) or §63.10(b):</p> <p>(a) The date, starting time and duration of each deviation from the requirements specified in this subpart along with the cause and corrective actions taken.</p> <p>(b) The date, starting time and, and duration of each malfunction, along with steps taken to minimize emissions, and corrective actions taken.</p> <p>(c) Date and type of engine maintenance that affects air emissions</p> <p>(d) A copy of the manufacturer’s certification OR other proof that the unit is meeting the required emission limits.</p>	<p>Rule 335-3-16-.05(c)(2) §60.7(f), §63.10(b)</p> <p>§63.6655(a)(1) §63.6660(a) & (b)</p> <p>Rule 335-3-16-.05(c)(2) §63.6655(a)(2) & (5) §63.6660(a) & (b)</p> <p>Rule 335-3-16-.05(c)(2) §60.4214(a)(2)(ii) §60.4245(a)(2) §63.6655(a)(4), (d), & (e)(2) §63.6660(a) & (b)</p> <p><u>For Diesel Engines:</u> §60.4214(a)(2)(iii) & (iv)</p> <p><u>For Natural Gas Engines:</u></p>

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Federally Enforceable Provisos	Regulations
	§60.4245(a)(3) & (4)
(e) A copy of the fuel gas certification shall be maintained onsite.	Rule 335-3-16-.05(c)(2) §63.6660(a) & (b)
(f) Operating hours for each engine's usage type: [Operating Hours/Month]	Rule 335-3-14-.04 [Anti-PSD Limit] Rule 335-3-16-.05(c)(2) §60.4214(b), §60.4245(b) §63.6655(f) §63.6660(a) & (b)
(g) If an emergency engine operates for more than 15 hours per calendar year for the purposes specified in NSPS IIII or NSPS JJJJ, an annual report shall be submitted:	§60.4214(d) §60.4245 (e)
(1) The report must contain the information specified in the applicable subpart	§60.4214(d)(1) §60.4245 (e)(1)
(2) The report must be submitted on the schedule specified in the applicable subpart	§60.4214(d)(2) §60.4245 (e)(2)
(3) Except as allowed, the annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). A notification of the annual report's submittal to EPA must be provided to the Department.	§60.4214(d)(3) §60.4245 (e)(3)
(h) If an engine is subject to NSPS JJJJ, the following recordkeeping requirement shall be met:	
(1) The records specified in §60.4245(a) shall be maintained.	§60.4245(a)
(2) For engines that do not meet the standards applicable for non-emergency engines, the requirements specified in §60.4245(b) shall be maintained.	§60.4245(b)
(3) For engine No. 70311, a certificate of conformity shall be maintained.	§60.4231(a)

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Federally Enforceable Provisos	Regulations
<p>(4) Provided that propane is used for a maximum of 100 hours per year as an alternative fuel during emergency operation, a record of such use shall be maintained.</p> <p>(i) Records of each occurrence when a visible emission observation was conducted on an engine shall be maintained</p> <p>(j) These records may be kept in electronic form, provided that they are readily accessible. Alternatively, they may be kept in hardcopy form.</p> <p>2. If performance testing is required a copy of the test much be submitted to the Department within 60 days after the test has been completed.</p> <p>3. Each deviation from the requirements specified in this subpart, including those that occur during startups, shutdowns, and malfunctions, shall be reported to the Department in a manner that complies with proviso 15(b) and 21(b) of the <i>General Permit Provisos</i> subpart of this permit.</p>	<p>§60.4243(e)</p> <p>Rule 335-3-4-.01(2) Rule 335-3-16-.05(c)(1)(i)</p> <p>Rule 335-3-16-.05(c)(2) §63.6660(a), (b), & (c)</p> <p>§60.4245(d)</p> <p>Rule 335-3-16-.05(c)(2) Rule 335-3-16-.05(c)(3)(ii) §63.6640(b) §63.6650(f)</p>