12/18/15

west virginia department of environmental protection

Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone 304/926-0475

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.wvdep.org

ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Permit No.:	R13-2438R
Plant ID No.:	053-00007
Applicant:	ICL-IP America Inc. (ICL-IP)
Facility Name:	Gallipolis Ferry Plant
Location:	Mason County
SIC Code:	2869 - Industrial Organic Chemicals, Not Elsewhere Classified
Application Type:	Class II Administrative Update
Received Date:	September 10, 2015
Engineer Assigned:	John Legg
Fee Amount:	$1,300.00
Date Paid:	October 29, 2015
Applicant Ad Date:	September 8, 2015
Newspaper:	Point Pleasant Register
Complete-By Date:	September 1, 2015 (10/29/15 - Date Permit Fee was paid.)
UTM's:	Easting: 395.6 km Northing: 4,292.3 km Zone: 17S
Lat/Longs:	Latitude: 38.77303 N Longitude: -82.20183 W
Description:	Replace an 1976 year, 190 hp emergency diesel firewater pump with a 2015 year, 237 bhp (177 kW) diesel emergency firewater pump. The new emergency firewater pump is EPA compliant/certified to meet the requirements of 40 CFR 60 Subpart IIII for 2015. The manufacturer and model number for the new diesel firewater pump are: John Deere Clarke, Model JU6H-UFAD88.

SUMMARY

ICL-IP proposes to replace an older (installed 1976), 190 hp, diesel-fueled engine with a newer (2015 year) 237 hp, John Deere Clarke, Model JU6H-UFAD88, diesel-fired engine to provide firewater to the facility during an electrical power outage/emergency.

Based on operating the new engine 500 hr/yr, estimated emissions are:

	(lb/hr)	(ton/yr)
VOC's	0.05 lb/hr	0.01 ton/yr;
Nitrogen Oxides (NO_x)	1.48 lb/hr	0.37 ton/yr;
Carbon Monoxide (CO)	0.47 lb/hr	0.12 ton/yr;
Particulate Matter (PM)	0.05 lb/hr	0.01 ton/yr;
Sulfur Dioxide (SO2)	0.39 lb/hr	0.10 tpy and
HAPs	0.01 lb/hr	0.03 tpy

PROCESS DESCRIPTION

The replacement diesel emergency firewater pump is described in Table 1 and 2 below:

Table 1: Changes to Emission Unit Table for the Replacement of the Diesel Emergency Firewater Pump Engine to be located at ICL-IP America, Inc.'s Gallipolis Ferry Plant, Mason County, WV.

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
P-434	H-P-434	Diesel Engine Emergency Firewater Pump	~~1976~~ 2015	~~190 hp~~ 237 bhp	None

Table 2: Information on Replacement Diesel Emergency Firewater Pump to be Located at ICL-IP America, Inc.'s Gallipolis Ferry Plant, Mason County, WV.

Permit Related Information	
Emission Unit ID No.	P-434
Emission Point ID No.	H-P-434
John Deere Nameplate Rating Information	
Clarke Model	JU6H-UFAD88
Power Rating (BHP/kW)	237/177
Certified Speed (RPM)	1760
Fuel Consumption (Permit Application - Attachment N)	12 gal/hr
Heat Input (based on 137,000 Btu/gal of Diesel Oil)	1.644 MM Btu/hr
Rating Data	

Table 2: Information on Replacement Diesel Emergency Firewater Pump to be Located at ICL-IP America, Inc.'s Gallipolis Ferry Plant, Mason County, WV.

Rating		6068HFC28A	
Certified Power (kW)		177	
Vehicle Model Number		Clarke Fire Pump	
Certificate Data			
Engine Model Year		2015	
EPA Family Name		FJDXL06.8120	
EPA JD Name		350HAK	
EPA Certificate Number		FJDXL06.8120-004	
CARB Executive Order		Not Applicable	
Parent of Family		6068HFG82A	
Emissions	Units	g/kW-hr	lb/hr
	NOx	3.79	1.48
	HC	0.12	0.047
	NOx + HC	N/A	N/A
	PM	0.12	0.047
	CO	1.2	0.47

SITE INSPECTION

The writer did not inspect ICL-IP's Gallipolis Ferry Plant. The plant is routinely inspected by DAQ's Charleston Office . Enforcement Inspector Dan Bauerle last inspected the facility on July 31, 2014. At that time the facility was found to be in compliance and was given the inspection code 30.

Directions to ICL-IP's Gallipolis Ferry Plant as given in application:

Adjacent to State Route 2 in Gallipolis Ferry, WV.

ESTIMATE OF EMISSIONS

The following passage is from the Permit Application, Attachment N (Emission Calculations):

Emissions were calculated using a combination of EPA Certified Engine Data, AP-42 Chapter 3.3 Emission Factors. Nitrogen oxides, carbon monoxide, particulate matter and volatile organic compounds calculations were developed using EPA Certified Emission Date (Rating 6068GHFC28A) for the John-Deer Clarke Model Engine JU6H-UFAD88. It was conservatively assumed that the hydrocarbon value of 100% comprised volatile organic compounds. Sulfur oxide emissions were calculated using AP-42 emission factors. The calculation assumptions including the brake-specific fuel combustion, diesel fuel density and diesel fuel heating values used for AP-42 calculations were retrieved from AP-42 Chapter 3.3

Writer's Review

The writer reviewed the emission calculations found in Attachment N of the permit application and found the calculations to be logical and accurate. Emissions are summarized in Tables 3 thru 5 below:

Table 3: Hourly and Annual Emissions from ICP-IP's Replacement Diesel-fired, Emergency Firewater Pump to be located at Gallipolis Ferry, WV.

Pollutant	Maximum Emissions (Uncontrolled)		
	John Deere Clarke Model JU6H-UFAD88, 237 bhp/ 177 kW Emergency Firewater Pump Engine		
	(g/kW-hr)	(lb/hr)	(ton/yr) [3]
Nitrogen Oxides (NO_x)	3.79 [1]	1.48	0.37
Carbon Monoxide (CO)	1.2 [1]	0.47	0.12
SOx	.00205 lb/hp-hr [4]	0.49	0.12
Particulate Matter (PM)	0.12 [1]	0.05	0.01
Volatile Organic Compounds (VOC)	0.12 [2]	0.05	0.01
Total HAPs [4]	---	0.01	0.03

(1) Emission Factors for NOx, CO and PM from Engine's EPA Certification 6068HFC28A.
(2) Emission Factor For VOC based upon AP-42, Chapter 3.3 (Revised October 1996).
(3) Annual Based on 500 hr/yr of operation.
(4) SOx and HAPs emission rates based upon AP-42, Chapter 3.3 (revised October 1996)

Table 4: Delta Emissions (Replacement - Old), Diesel-fired Emergency Firewater Pumps, ICL-IP, Gallipolis Ferry, WV.

Pollutant	Maximum Emissions (Uncontrolled)					
	New Fire Pump		Old Fire Pump		Delta (New - Old)	
	(lb/hr)	(ton/yr) [1]	(lb/hr)	(ton/yr) [1]	(lb/hr)	(ton/yr) [1]
Nitrogen Oxides (NO_x)	1.48	0.37	4.34	1.09	-2.86	-0.72
Carbon Monoxide (CO)	0.47	0.12	0.94	0.23	-0.47	-0.11
Sulfur Dioxide (SO2)	0.49	0.12	0.29	0.07	+0.20	+0.05 [2]
Particulate Matter (PM)	0.05	0.01	0.31	0.08	-0.26	-0.07
Volatile Organic Compounds (VOC)	0.05	0.01	0.35	0.09	-0.30	-0.08
Total HAPs [4]	0.01	0.03	---	---	+0.10	+0.03 [2]

(1) Annual Based on 500 hr/yr of operation.
(2) Positive (+) delta emissions were advertised in ICL-IP's 9/8/15 legal advertisement which ran in the Point Pleasant Register. Due to a calculation mistake, SO2 emissions were advertised as +0.03 ton/yr (instead of 0.05 ton/yr). The mistake was deemed by DAQ to be insignificant.

REGULATORY APPLICABILITY

ICL-IP's Gallipolis Ferry, WV facility is an existing Title V source with the potential to emit over 100 TPY of NOx emissions. This update does not change the faciliy's permit status, i.e., the facility remains a Title V source.

The following State and Federal Rules were examined for applicability:

45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation."

ICL-IP is an existing stationary source that already has a Rule 13 permit (R13-2438Q).

The installation of the replacement emergency firewater pump diesel engine is considered to be a modification because the engine is subject to NSPS Subpart IIII.

ICL-IP submitted a complete application, ran a legal advertisement, and paid an application fee to modify their current permit.

45CSR16 "Standards of Performance for New Stationary Sources"

Adopts by reference the standards of performance for new stationary sources promulgated by the United States Environmental Protection Agency pursuant to section 111(b) of the federal Clean Air Act, as amended (CAA). This rule codifies general procedures and criteria to implement the standards of performance for new stationary sources set forth in 40 CFR Part 60. The rule also adopts associated reference methods, performance specifications and other test methods which are appended to these standards.

40 CFR 60, Subpart IIII applies to the new diesel engine. See below.

40CSR30 - "Requirements for Operating Permits."

The facility is considered to be a Title V source. The replacement emergency firewater pump engine has no affect on Title V applicability.

40 CFR 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines."

On July 11, 2006 the USEPA issued the NSPS for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE). This rule outlines standards of performance for stationary compression ignition (CI) internal combustion engines (ICE). The rule segments applicability primarily by whether the applicant is an engine manufacturer, or an owner/operator.

ICL-IP is subject to Subpart IIII because the new emergency diesel firewater pump engine is a stationary CI ICE that commenced construction after July 11, 2005, and were manufactured after April 1, 2006.

The engine is USEPA Certified for the engine manufacturer/John Deere/Clarke and as such is not required to perform an initial performance test. The unit will operate as an emergency firewater pump engine and will be limited to 100 hours per year of non-emergency operation and 500 hours per year for total operation.

Table 5: U.S. EPA Certificate Numbers for 40 CFR 60 Subpart IIII Compliance.			
Diesel Firewater Pump Engine	**Engine Manufacturer/ Certificate Issued to:**	**EPA Engine Family**	**EPA Certificate Number**
177 kW, 237 BHP, 1760 rpm	John Deere (Clarke Model JU6H-UFAD88 Fire Pump)	FJDXL06.8120 (Rating 6068HFC28A)	FJDXL06.8120-004 (EPA JD Name: 350HAK; Parent of Family 6068FHG82A)

40CFR63, Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combust Engines"

Subpart ZZZZ establishes national emission limitations and operating limitations for HAPs emitted from stationary RICE located at major and area sources of HAP emissions. The subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

ICL-IP is classified as an area source of HAP emissions (individual HAP with potential emissions less than or equal to 10 ton/yr; aggregated HAP with potential emissions less than or equal to 25 ton/yr) and will remain so after this modification.

The internal combustion engine for the emergency firewater pump is classified as an affected source under 40 CFR 63 Subpart ZZZZ. §§63.6590 (c) and (c)(1) state that for engines located at an area source of HAPs, if the source meets the requirements of Subpart IIII that no requirements of Subpart ZZZZ apply to the engine. Thus, the proposed engine is not subject to any requirements of this subpart.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

The combustion of #2 diesel fuel in the replacement emergency firewater pump engine results in the formation very small amounts of Hazardous Air Pollutants (HAP). The replacement engine should not emit any pollutant(s) that are not already being emitted by other sources at the facility.

AIR QUALITY IMPACT ANALYSIS

Seet Table 4 above. The proposed update decreases NOx, CO, PM, and VOC emissions and only sightly increases SO2 (+0.05 ton/yr) and HAP (+0.03 ton/yr) emissions. For this reason no air quality modeling was required.

MONITORING OF OPERATIONS

60 CFR 60 Subpart IIII sets specific monitoring and record-keeping requirements for the emergency generator engine:

- Section 4.2.6 (existing, page 39) demonstrates compliance with the maximum hours of operation limits set forth in Table 2.1.18.2. The permittee shall: a) install, calibrate, calibrate, maintain, and operate equipment to monitor the horus of operation of each diesel engine; b) monitor and record the montly and rolling tweleve month total hours of operation of each unit.
- Section 4.2.10 (new; page 39) requires the permittee to keep records of operation of the firewater pump engine in emergency and non-emergency service that are recorded through the non-resettalbe hour meter. The permittee must record the time of operation of the engine and the reason the engine was in operation during that time.
- Section 4.2.11. (new; page 39) requires the permittee to keep records of any corrective action taken after the back pressure monitor for the emergency firewater pump has notified the permittee that the high back pressure limit of the engine is approached.

The emergency firewater pump is is certified and does not need to be performance tested. If in the future the should need to be tested, the test are to be conducted according to paragraphs (a) through (e) of 40 CFR §60.4212.

CHANGES MADE TO OLD PERMIT (R13-2438Q)

The following changes were made to R13-2438Q to arrived at R13-2438R:

- Permit number changed (on front cover and on top of each page) from R13-2438Q to 13-2438R.
- The permit issued date was updated.
- The "Description of Change" was updated.
- P-434, the replacement firewater pump engine Emission Unit ID was added to the 1.0 Emission Units Table, page 19 in the permit.
- The previously issued permit in section 2.4.1 (page 21) was changed to R13-2438Q.
- P-434's brake horsepower was updated in section 4.1.18.2's table (page 35).
- P-434's emissions limitations were updated in section 4.1.18.3's table (page 35).
- The following sections were added to the permit 4.1.18.7 through 4.1.18.14 (pages 36 and 37).

The above changes are shown in the compare file which is attached to this evaluation.

RECOMMENDATION TO DIRECTOR

ICL-IP's request to replace and operate one (1) diesel-fueled emergency firewater pump at their Gallipolis Ferry, Mason County, WV facility meets the requirements of 45CSR13 (Rule 13) and all other applicable rules, and therefore should be granted a Rule 13 modification permit (R13-2438R).

John Legg
Permit Writer

December 18, 2015 12/18/15
Date

Table 3.3-1. EMISSION FACTORS FOR UNCONTROLLED GASOLINE AND DIESEL INDUSTRIAL ENGINES[a]

Pollutant	Gasoline Fuel (SCC 2-02-003-01, 2-03-003-01)		Diesel Fuel (SCC 2-02-001-02, 2-03-001-01)		EMISSION FACTOR RATING
	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	
NO_x	0.011	1.63	0.031	4.41	D
CO	6.96 E-03[d]	0.99[d]	6.68 E-03	0.95	D
SO_x	5.91 E-04	0.084	2.05 E-03	0.29	D
PM-10[b]	7.21 E-04	0.10	2.20 E-03	0.31	D
CO_2[c]	1.08	154	1.15	164	B
Aldehydes	4.85 E-04	0.07	4.63 E-04	0.07	D
TOC					
Exhaust	0.015	2.10	2.47 E-03	0.35	D
Evaporative	6.61 E-04	0.09	0.00	0.00	E
Crankcase	4.85 E-03	0.69	4.41 E-05	0.01	E
Refueling	1.08 E-03	0.15	0.00	0.00	E

[a] References 2,5-6,9-14. When necessary, an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr was used to convert from lb/MMBtu to lb/hp-hr. To convert from lb/hp-hr to kg/kw-hr, multiply by 0.608. To convert from lb/MMBtu to ng/J, multiply by 430. SCC = Source Classification Code. TOC = total organic compounds.

[b] PM-10 = particulate matter less than or equal to 10 μm aerodynamic diameter. All particulate is assumed to be ≤ 1 μm in size.

[c] Assumes 99% conversion of carbon in fuel to CO_2 with 87 weight % carbon in diesel, 86 weight % carbon in gasoline, average BSFC of 7,000 Btu/hp-hr, diesel heating value of 19,300 Btu/lb, and gasoline heating value of 20,300 Btu/lb.

[d] Instead of 0.439 lb/hp-hr (power output) and 62.7 lb/mmBtu (fuel input), the correct emissions factors values are 6.96 E-03 lb/hp-hr (power output) and 0.99 lb/mmBtu (fuel input), respectively. This is an editorial correction. March 24, 2009

Table 3.3-2. SPECIATED ORGANIC COMPOUND EMISSION FACTORS FOR UNCONTROLLED DIESEL ENGINES[a]

EMISSION FACTOR RATING: E

Pollutant	Emission Factor (Fuel Input) (lb/MMBtu)
Benzene[b]	9.33 E-04
Toluene[b]	4.09 E-04
Xylenes[b]	2.85 E-04
Propylene	2.58 E-03
1,3-Butadiene[b,c]	<3.91 E-05
Formaldehyde[b]	1.18 E-03
Acetaldehyde[b]	7.67 E-04
Acrolein[b]	<9.25 E-05
Polycyclic aromatic hydrocarbons (PAH)	
Naphthalene[b]	8.48 E-05
Acenaphthylene	<5.06 E-06
Acenaphthene	<1.42 E-06
Fluorene	2.92 E-05
Phenanthrene	2.94 E-05
Anthracene	1.87 E-06
Fluoranthene	7.61 E-06
Pyrene	4.78 E-06
Benzo(a)anthracene	1.68 E-06
Chrysene	3.53 E-07
Benzo(b)fluoranthene	<9.91 E-08
Benzo(k)fluoranthene	<1.55 E-07
Benzo(a)pyrene	<1.88 E-07
Indeno(1,2,3-cd)pyrene	<3.75 E-07
Dibenz(a,h)anthracene	<5.83 E-07
Benzo(g,h,l)perylene	<4.89 E-07
TOTAL PAH	1.68 E-04

[a] Based on the uncontrolled levels of 2 diesel engines from References 6-7. Source Classification Codes 2-02-001-02, 2-03-001-01. To convert from lb/MMBtu to ng/J, multiply by 430.
[b] Hazardous air pollutant listed in the *Clean Air Act*.
[c] Based on data from 1 engine.

WordPerfect Document Compare Summary

Original document: Q:\AIR_QUALITY\J_LEGG\ICL-IP America, Inc\R13-2438R\053-00007_PERM_13-2438Q-redacted.wpd
Revised document: @PFDesktop\:MyComputer\Q:\AIR_QUALITY\J_LEGG\ICL-IP America, Inc\R13-2438R\053-00007_PERM_13-2438R.wpd
Deletions are shown with the following attributes and color:
~~Strikeout~~, Blue RGB(0,0,255).
Deleted text is shown as full text.
Insertions are shown with the following attributes and color:
Double Underline, Redline, Red RGB(255,0,0).

The document was marked with 28 Deletions, 41 Insertions, 0 Moves.

West Virginia Department of Environmental Protection
Division of Air Quality

Earl Ray Tomblin
Governor

Randy C. Huffman
Cabinet Secretary

Permit for Class ~~I~~II Administrative Update

R13-2438~~O~~R

~~**Redacted Copy per Company's CBI claim**~~

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45 C.S.R. 13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the facility listed below is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:
ICL-IP
Gallipolis Ferry
053-00007

William F. Durham
Director

Issued: ~~August~~December 1~~0~~8, 2015

This permit will supercede and replace Permit ~~R13-2438P issued on September 30, 2013~~R13-2438Q.

Facility Location:	Gallipolis Ferry, Mason County, West Virginia
Mailing Address:	PO Box 1721, Gallipolis Ferry, WV
Facility Description:	Specialty Chemical Manufacturing Facility
SIC Codes:	2899 – Chemicals and Allied Products – Chemical Preparations, NEC 2869 – Chemicals and Allied Products – Industrial Organic Chemicals, NEC
UTM Coordinates:	396.50 km Easting • 4,292.30 km Northing • Zone 17
Permit Type:	Class ~~I~~II Administrative Update
Description:	This update ~~is to remove the Fyrol CEF from the product mix of the Production Unit I/IV, Group 2 Production because it is no longer used for product~~manufacturingwill replace an 1976 year, 190 hp emergency diesel firewater pump (Emission Unit ID No. P-434) with a 2015 year, 237 bhp (177 kW) diesel emergency firewater pump. The new 2015 emergency firewater pump is EPA compliant/certified to meet the requirements of 40 CFR 60 Subpart IIII. The manufacture and model number for the new diesel firewater pump are: John Deere Clarke, Model JU6H-UFAD88. The EPA Certificate Number is FJDXL06.8120-004.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

The source is subject to 45CSR30. Changes authorized by this permit must also be incorporated into the facility's Title V operating permit. Commencement of the operations authorized by this permit shall be determined by the appropriate timing limitations associated with Title V permit revisions per 45CSR30.

Table of Contents

1.0 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
WWTU	P-662 (Various Fugitive)	Wastewater Treatment Unit	1987	600 gpm	Chemical Digester
Combustion Sources					
C-120	H-C-120	Air Compressor	1987	128 hp	None
C-209	E-C-209	Diesel Engine	1996	78 hp	None
OM-183	D-O-183	Diesel Engine	1978	375 hp	None
OM-184	D-O-184	Diesel Engine	1978	375 hp	None
OM-231	H-O-231	Diesel Engine	1988	368.8 hp	None
OM-296	P-O-296	Diesel Engine	1988	368.8 hp	None
P-434	H-P-434	Diesel Engine Emergency Firewater Pump	~~1976~~ 2015	237 hp	None
B-6	H-B-6	Boiler	1977	93.7 mmBtu/hr	None
B-5A	H-B-5A	Boiler	1998	122 mmBtu/hr	None
F-5	C-F-5	Heater	1960	8.2 mmBtu/hr	None
F-6	C-F-6	Heater	1969	6.4 mmBtu/hr	None
F-7	C-F-7	Heater	1976	0.75 mmBtu/hr	None
F-8	C-F-8	Heater	1976	0.75 mmBtu/hr	None

(1) Continuous and Naturals Sub-Units are part of the Tri Aryl Production and Bis Phosphate Units. The tanks listed under the Tri Aryl Production and Bis Phosphate Units are common to both the Continuous and Naturals Sub-Units.

(2) This Emission Unit is the same Emission Unit listed in the Bis Phosphates Unit.

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits and Procedures for Evaluation*

2.4. Term and Renewal

2.4.1. This permit supercedes and replaces previously issued Permit ~~R13-2438O~~R13-2438Q. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

2.5. Duty to Comply

2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2438 through R13-2438~~P~~R and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to; **[45CSR§§13-5.11 and 13-10.3]**

2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;

2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;

2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

2.7. Duty to Supplement and Correct Information

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

4.1.18.2 The following table provides a list of diesel engines authorized to operate at the subject facility by this permit. The units shall not exceed the specified maximum brake-horsepower, shall utilize the specified control device, and shall not exceed the specified maximum hours of operation.

Table 4.1.18.2: Diesel Engine Specifications

ID No.	Brake Horsepower	Control Device(s)	Maximum Annual Hours of Operation
C-120	128.00	None	500
C-209	78.00	None	500
OM-183	350.00	None	500
OM-184	350.00	None	500
OM-231	368.80	None	500
OM-296	368.80	None	500
P-434	~~190~~237.00	None	500

4.1.18.3 Emissions resulting from the operation of the sources identified under 4.1.18.1 and 4.1.18.2 shall not exceed those limits as specified in the following table:

Table 4.1.18.3: Combustion Unit Emission Limits

ID No.	CO		NO_x		PM[1]		SO_2		VOC	
	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
Boiler B-6	7.68	33.70	9.18	40.20	0.70	3.08	0.06	0.25	0.47	2.05
Boiler B-5A	10.00	43.80	24.40	106.80	0.91	4.00	0.07	0.32	0.61	2.67
Heater F-5	0.67	2.95	0.80	3.52	0.06	0.27	0.01	0.02	0.04	0.18
Heater F-6	0.52	2.30	0.63	2.75	0.05	0.21	0.00	0.02	0.03	0.14
Heater F-7	0.06	0.27	0.07	0.32	0.01	0.03	0.01	0.01	0.01	0.02
Heater F-8	0.06	0.27	0.07	0.32	0.01	0.03	0.01	0.01	0.01	0.02
C-120	1.74	0.43	8.06	2.00	0.57	0.14	0.53	0.13	0.66	0.16
C-209	0.40	0.10	1.85	0.46	0.13	0.03	0.12	0.03	0.15	0.04
OM-183	2.34	0.58	10.90	2.71	0.77	0.19	0.72	0.18	0.88	0.22
OM-184	2.34	0.58	10.90	2.71	0.77	0.19	0.72	0.18	0.88	0.22
OM-231	2.47	0.62	11.50	2.87	0.81	0.20	0.76	0.19	0.93	0.23
OM-296	2.47	0.62	11.50	2.87	0.81	0.20	0.76	0.19	0.93	0.23
P-434(2)	0.~~94~~47	0.~~234.34~~ 12	1.~~09~~48	0.37	0.05	0.01	0.49	0.~~310.08~~ ~~0.290.07~~ 12	0.~~35~~05	0.09~~1~~

(1) All particulate matter emissions are assumed to be PM_{10} or less.
(2) Emissions certified by firewater pump engine manufacturer (see Section 4.1.18.8 below).

4.1.18.4 The fuel burning units, identified as Boiler B-6 and Boiler B-5A, are subject to the applicable limitations and standards under 45CSR2, as given below under (a) through (c).

a The permittee shall not cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from the fuel burning units which is greater than ten (10) percent opacity based on a six minute block average.
[45CSR§2-3.1]

b. The permittee shall not cause, suffer, allow or permit the discharge of particulate matter into the open air from the fuel burning units, measured in terms of pounds per hour in excess of the amount determined as follows:

(1) The product of 0.05 and the total design heat inputs for such units in million British Thermal Units (B.T.U.'s) per hour, provided however that no more than twelve hundred (1200) pounds per hour of particulate matter shall be discharged into the open air. **[45CSR§2-4.1a]**

c. The visible emission standards set forth in section 3 of 45CSR2 shall apply at all times except in periods of start-ups, shutdowns and malfunctions. Where the Director believes that start-ups and shutdowns are excessive in duration and/or frequency, the Director may require an owner or operator to provide a written report demonstrating that such frequent start-ups and shutdowns are necessary. **[45CSR§2-9.1]**

4.1.18.5 The fuel burning units, identified as the Boiler B-6 and Boiler B-5A, are subject to the applicable limitations and standards under 45CSR10, as given below under (a).

a. The permittee shall not cause, suffer, allow or permit the discharge of sulfur dioxide into the open air from the fuel burning units measured in terms of pounds per hour, in excess of the product of 3.1 and the total design heat input of the Boiler B-6 and Boiler B-5A in million BTU's per hour. **[45CSR§10-3.1]**

4.1.18.6. Pursuant to 40 CFR 60, Subpart Db, Boiler B-5A is subject to the following limitations and standards given below under (a) and (b).

a. On and after the date on which the initial performance test is completed or is required to be completed under 40 CFR §60.8, whichever date comes first, the permittee shall not cause to be discharged into the atmosphere from Boiler B-5A any gases that contain nitrogen oxides (expressed as NO_2) in excess of:

(1) 0.10 lb/MMBtu heat input at low-heat release rate, or
(2) 0.20 lb/MMBtu heat input at high-heat release rate.
[40 CFR §60.44Db(a)]

b. On and after the date on which the initial performance test is completed or is required to be completed under 40 CFR §60.8, whichever date comes first, the permittee shall not cause to be discharged into the atmosphere from Boiler B-5A any gases that contain nitrogen oxides (expressed as NO_2) in excess of 0.20 lb/MMBtu heat input. **[40 CFR §60.44Db(l)(1)]**

4.1.18.7. The 2015 year, 177 kW/237 bhp firewater pump engine manufacturer must certify that their engine meets the emissions standards in table 4 of this subpart. **[40 CFR§60.4202(d)]** (P-434)

4.1.18.8. The firewater pump engine must be fueled with diesel fuel that meets the requirements of 40 CFR 80.610(b). **[40 CFR§60.4207(b)]** (P-434)

4.1.18.9. The firewater pump engine must have installed a non-resettable hour meter prior to startup of the engine. **[40 CFR§60.4209(a)]** (P-434)

4.1.18.10. The firewater pump which is equipped with a diesel particulate filter must install a back pressure monitor that notifies the permittee when the high back pressure limit of the engine is approached.
[40 CFR§60.4209(b)] (P-434)

4.1.18.11. The permittee must operate and maintain the firewater pump engine such that it achieves the emission standards as required in §§60.4205 over the entire life of the engine.
[40 CFR§60.4206] (P-434)

4.1.18.12. The firewater pump engine must be installed and configured according to the manufacturer's emission-related specifications.
[40 CFR§60.4211(c)] (P-434)

4.1.18.13. The permittee shall operate the emergency firewater pump engine according to the requirements listed below:

(1) There is no time limit on the use of the above engine in emergency situations.

(2) The permittee may operate the above engine for any combination of purposes specified below for a maximum of 100 hours per calendar year.

(i) The above engine may be operated for maintenance checks and readiness testing provided that the tests are recommended by federal, state or local government or the manufacturer. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks or readiness testing, but a petition is not required if the permittee maintains records indicating the federal, state or local standards require maintenance and testing of the above engine beyond 100 hours per calendar year.

(iii) The above engine may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) The emergency firewater pump may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (2) of this section. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
[40 CFR§60.4211(f)] (P-434)

4.1.18.14. If the permittee does not install, configure, operate, and maintain the emergency firewater pump engine according to the manufacturer's emission-related written instructions, or if the permittee changes the emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:

(2) The permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission related written instructions, or within 1 year after the permittee changes the emission-related settings in a way that is not permitted by the manufacturer.

[40 CFR§60.4211(g)] (P-434)

4.1.19. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. **[45CSR§13-5.11.]**

4.2. Monitoring, Compliance Demonstration, and Record-Keeping Requirements

4.2.1. When the permittee uses any material(s) with a potential to emit of less than 5 pounds per year of an additional HAP that is not limited under Section 4.0 of the permit, the permittee shall maintain records of the use of these materials and any emissions associated with their use. This information will be included in the compliance report required under 4.5.1.

4.2.2. Monitoring of the scrubbers listed under Table 4.1.6 shall be in accordance with the following:

a. The permittee shall install, operate, and maintain instrumentation to continuously monitor the input liquor flow rate of each scrubber. The accuracy of the monitor shall be verified not to exceed ± 0.10 gal/min.

b. The permittee shall calculate and record the daily averages of input liquor flow rates for each scrubber. The daily averages shall be the calculated average of all hourly averages, which are in turn calculated from a minimum of 60 data points collected once per minute.

c. If the calculated daily average is less than the minimum flow rate given under Table 4.1.6, the permittee shall conduct an evaluation of the scrubber to determine the corrective action that needs to be taken. If action to correct the situation is not completed within 24 hours after the excursion is recorded, the permittee shall cease production in the units controlled by the scrubber. Each excursion event shall be recorded and shall include a report of any corrective action taken.

4.2.3. Compliance with the emission limits set forth in Tables 4.1.11.1, 4.1.12.1, 4.1.13.1, 4.1.14.1, 4.1.15.1, 4.1.16.1, and 4.1.17.1 shall be demonstrated by calculating applicable emissions using facility developed emission factors (based upon emissions testing data), emission modeling software, or other appropriate emission estimation models or calculation methodologies. The emission factors, emission models, and other calculation methods shall be maintained current for all processes, process modifications and new product variants. The permittee shall produce, upon request by the Director, and within a reasonable time-frame, calculations that show the actual emissions of the facility (based on the emission factors as described above) from the previous 12 calendar months.

4.2.4. For the purposes of demonstrating continuous compliance with maximum permitted production limitations set forth in Tables 4.1.11.2, 4.1.12.2, and 4.1.13.2, the permittee shall daily monitor and record the following in each subunit: material produced and the amount or batches produced as applicable.

4.2.5. For the purposes of demonstrating compliance with maximum natural gas usage limits set forth in Table 4.1.18.1, the permittee shall:

a. Install, calibrate, maintain, and operate equipment to monitor the amount of natural gas that is consumed in Boiler B-5A.

b. Install, calibrate, maintain, and operate equipment to monitor the hours of operation of each boiler (with the exception of Boiler B-5A) so as to calculate the amount of natural gas that is consumed.

c. Monitor or calculate, as applicable, and record the monthly and rolling twelve month total amount of natural gas that is consumed in each boiler.

4.2.6. For the purposes of demonstrating compliance with maximum hours of operation limits set forth in Table 4.1.18.2, the permittee shall:

a. Install, calibrate, maintain, and operate equipment to monitor the hours of operation of each diesel engine.

b. Monitor and record the monthly and rolling twelve month total hours of operation for each unit.

4.2.7. The permittee shall install, calibrate, maintain, and operate CEMS for measuring NO_x and O_2 (or CO_2) emissions discharged to the atmosphere from Boiler B-5A, and shall record the output of the system; or monitor steam generating unit operating conditions and predict NO_x emission rates as specified in a plan submitted pursuant to 40 CFR §60.49b(c).
[40 CFR §60.48Db(b)(1) and 40 CFR §60.44Db(g)(2)]

4.2.8. The permittee shall, with respect to Boiler B-5A, comply with all applicable monitoring, record-keeping, and reporting requirements of 40 CFR 60, Subpart Db, provided that the permittee meet any more stringent limitations set forth in this permit.

4.2.9. The permittee shall comply with all applicable monitoring, record-keeping, and reporting requirements of 45CSR2, 45CSR10, and 40 CFR 63, Subpart H, provided that the permittee meet any more stringent limitations set forth in this permit.

4.2.10. The permittee is not required to submit an initial notification for the emergency firewater pump engine. The permittee is required to keep records of the operation of the firewater pump engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee must record the time of operation of the engine and the reason the engine was in operation during that time.
[40 CFR§60.4214(b)] (P-434)

4.2.11. The permittee shall keep records of any corrective action taken after the back pressure monitor for the emergency firewater pump engine has notified the permittee that the high back pressure limit of the engine is approached.
[40 CFR§60.4214(c)] (P-434)

4.3. Testing Requirements

4.3.1. The permittee shall continue the application of all previously agreed upon performance testing schedules including those specified under previous iterations of this permit and those agreed upon with the Director outside the scope of a permitting action. Further, at such reasonable time(s) as the Director may designate, the permittee shall conduct or have conducted additional performance tests to determine compliance with the emission limits under Section 4.0 of this permit according to the procedures under 3.3.1.

4.3.2. The permittee shall meet all applicable testing requirements of 45CSR2, 45CSR10, 40 CFR 60, Subpart Db, and 40 CFR 63, Subpart H, provided that the permittee meet any more stringent limitations set forth in this permit.

4.3.3. The permittee of the emergency firewater pump engine who conducts performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.
[40 CFR§60.4212] (P-434)