

West Virginia Department of Environmental Protection

Harold D. Ward

Cabinet Secretary

Permit to Operate



Pursuant to

Title V

of the Clean Air Act

Issued to:

Eastern Gas Transmission and Storage, Inc.

Hastings Extraction Plant

R30-10300009-2022

Laura M. Crowder

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Director, Division of Air Quality

Issued: October 18, 2022 • Effective: November 1, 2022
Expiration: October 18, 2027 • Renewal Application Due: April 18, 2027

Permit Number: **R30-10300009-2022**
Permittee: **Eastern Gas Transmission and Storage, Inc.**
Facility Name: **Hastings Extraction Plant**
Permittee Mailing Address: **925 White Oaks Blvd., Bridgeport, WV 26330**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Pine Grove, Wetzel County, West Virginia
Facility Mailing Address:	Route 20, Pine Grove, WV 26419
Telephone Number:	(304) 889-3850
Type of Business Entity:	Corporation
Facility Description:	Natural Gas Extraction
SIC Codes:	1321
UTM Coordinates:	528.64 km Easting • 4377.66 km Northing • Zone 17

Permit Writer: Natalya V. Chertkovsky-Veselova

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.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

Table of Contents

1.0.	Emission Units and Active R13, R14, and R19 Permits.....	3
2.0.	General Conditions.....	5
3.0.	Facility-Wide Requirements and Permit Shield.....	14

Source-specific Requirements

4.0.	HEP¹ Boilers: BL01, BL03 (004-01, BL03).....	21
5.0.	HEP¹ Hot Oil Heater: HTR3 (004-05).....	23
6.0.	HEP¹ Backup Generators: AUX02 (002-02), AUX03 (002-03), AUX04 (002-04), and Fire Water Heaters: FW-1 and FW-3.....	25
7.0.	HEP¹ Natural Gasoline Storage Tank: TK10 (005-02).....	32
8.0.	HEP¹ 40 C.F.R. 60, Subpart KKK and Subpart VV² Requirements (LDAR).....	36
9.0.	Galmish Diesel Fired Firewater Pumps: EN01 (001-01), EN02 (001-02), EN03 (001-03) and Fire Water Heaters: FW-2 and FW-4.....	53
10.0.	Railcar Loading Operations at Galmish Loading Area.....	57
11.0.	Knock-out Tank at the Hastings Electric Compressor Station (HECS).....	61

¹ Hastings Extraction Plant

² Requirements incorporated by reference in 40 CFR 60, Subpart KKK.

1.0. Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
Galmish Loading Area					
001-01	EN01	Galmish Diesel Fired Firewater Pump, John Deere Model 6081HF001	2008	300 HP	NA
001-02	EN02	Galmish Diesel Fired Firewater Pump, John Deere Model 6081HF001	2008	300 HP	NA
001-03	EN03	Galmish Diesel Fired Firewater Pump, John Deere Model 6668HFC48B	2010	211 HP	NA
T-FW-2	FW-2	Galmish Fire Water Heater 1 RBI Model LB1650 – propane fired	2006	1.65 MMBtu/hr	NA
T-FW-4	FW-4	Galmish Fire Water Heater 2 RBI Model LB1650 – propane fired	2012	1.65 MMBtu/hr	NA
006-01	Product Recovery or VS-1*	Railcar Tanker Transfer Racks, 21 Stations	1951	550 GPM of each Gasoline, Propane, Isobutane, n-Butane	VRU-1
VRU-1	Product Recovery	Vapor Recovery Unit (VRU) Includes the air coolers: Vessels V-3610, V-3630, & V-3650; and recovered Liquid Pumps	2012	NA	NA
Hastings Electric Compressor Station (HECS)					
V-2195	V-2195	HECS Knockout Tank	2002	2,936 gallons	NA
Hastings Extraction Plant (HEP)					
004-01	BL01	HEP Boiler; Cleaver Brooks 101-CB	1971	25.1 MMBtu/hr	NA
	BL03	HEP Boiler; Superior X6-X-3000	2015	25.2 MMBtu/hr	NA
004-05	HTR3	HEP Hot Oil Heater; Callidus Tech. OPF	2003	70 MMBtu/hr	NA
005-02	TK10***	HEP Vertical Floating Roof Natural Gasoline Storage Tank	2017	1,000,000-gallon	IFR**
T-FW-1	FW-1	HEP Fire Water Heater Brown Fired Heater Model 302-6 – Natural Gas Fired	2002	0.2 MMBtu/hr	NA
T-FW-3	FW-3	HEP Fire Water Heater (near Tank 10) RBI Model MB3000 – Natural Gas fired	2010	3 MMBtu/hr	NA
002-02	AUX02	HEP Backup Emergency Generator;	2002	50KW (67 HP)	NA

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
		Kohler Auxiliary Generator (SI engine)			
002-03	AUX03	HEP Emergency Generator; Dayton (SI engine)	2004	40KW (57 HP)	NA
002-04	AUX04	HEP Emergency Generator, Cummins, Onan (SI engine)	2005	85KW (120 HP)	NA

- * VS-1 is a common emission point for sources at the extraction plant and loading facilities
- ** IFR – Internal Floating Roof

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-2468E	August 18, 2021

2.0. General Conditions

2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	NSPS	New Source Performance Standards
CBI	Confidential Business Information	PM	Particulate Matter
CEM	Continuous Emission Monitor	PM₁₀	Particulate Matter less than 10µm in diameter
CES	Certified Emission Statement	pph	Pounds per Hour
C.F.R. or CFR	Code of Federal Regulations	ppm	Parts per Million
CO	Carbon Monoxide	PSD	Prevention of Significant Deterioration
C.S.R. or CSR	Codes of State Rules	psi	Pounds per Square Inch
DAQ	Division of Air Quality	SIC	Standard Industrial Classification
DEP	Department of Environmental Protection	SIP	State Implementation Plan
FOIA	Freedom of Information Act	SO₂	Sulfur Dioxide
HAP	Hazardous Air Pollutant	TAP	Toxic Air Pollutant
HON	Hazardous Organic NESHAP	TPY	Tons per Year
HP	Horsepower	TRS	Total Reduced Sulfur
lbs/hr or lb/hr	Pounds per Hour	TSP	Total Suspended Particulate
LDAR	Leak Detection and Repair	USEPA	United States Environmental Protection Agency
m	Thousand	UTM	Universal Transverse Mercator
MACT	Maximum Achievable Control Technology	VEE	Visual Emissions Evaluation
mm	Million	VOC	Volatile Organic Compounds
mmBtu/hr	Million British Thermal Units per Hour		
mmft³/hr or mmcf/hr	Million Cubic Feet Burned per Hour		
NA or N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

- 2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]
- 2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]
- 2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]
- 2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

- 2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

- 2.5.1. This permit shall be reopened and revised under any of the following circumstances:
- a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.
 - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.
 - c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

- 2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

- 2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

- 2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

- 2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

- 2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:
- a. The change must meet all applicable requirements and may not violate any existing permit term or condition.
 - b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
 - c. The change shall not qualify for the permit shield.
 - d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
 - e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

- f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

- 2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.

[45CSR§30-5.8]

- 2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.

[45CSR§30-5.8.a.]

- 2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

- a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or
- b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

- 2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

[45CSR§30-2.40]

2.12. Reasonably Anticipated Operating Scenarios

- 2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.
- a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.
 - b. The permit shield shall extend to all terms and conditions under each such operating scenario; and
 - c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

- 2.13.1. 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; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

- 2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:
- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
 - d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

- 2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:
- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
 - b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

- 2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

[45CSR§30-5.1.f.2.]

2.17. Emergency

- 2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

[45CSR§30-5.7.a.]

- 2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.

[45CSR§30-5.7.b.]

- 2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The permitted facility was at the time being properly operated;
- c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

- d. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

- 2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

[45CSR§30-5.7.d.]

- 2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

[45CSR§30-5.7.e.]

2.18. Federally-Enforceable Requirements

- 2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.

[45CSR§30-5.2.a.]

- 2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

- 2.19.1. 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 modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required 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.

[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

- 2.20.1. 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.

[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.

[45CSR§30-5.6.a.]

2.21.2. Nothing in this permit shall alter or affect the following:

- a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
- b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.
- c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.

[45CSR§30-5.3.e.3.B.]

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.

[45CSR§30-5.1.e.]

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.

[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

- a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

- b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.
- c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

- 2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.

[45CSR§30-5.1.a.2.]

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. [45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible. [45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them. [40 C.F.R. §61.145(b) and 45CSR34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. [45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11. [45CSR§11-5.2]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. [W.Va. Code § 22-5-4(a)(14)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.
 - c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.
- [40 C.F.R. 82, Subpart F]

- 3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.

[40 C.F.R. 68]

- 3.1.9. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed at the HEP 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§13-5.10 and 45CSR13, R13-2468, 5.1.6]

3.2. Monitoring Requirements

- 3.2.1. None.

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

- d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language.
 2. The result of the test for each permit or rule condition.
 3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(14-15) and 45CSR13]

3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
 - a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A. and 45CSR13, R13-2468, 4.4.1, 5.4.1, and 6.4.1]

- 3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]
- 3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]

- 3.4.4. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment at the HEP listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures. [45CSR13, R13-2468, 5.4.2]
- 3.4.5. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment at the HEP listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- a. The equipment involved.
 - b. Steps taken to minimize emissions during the event.
 - c. The duration of the event.
 - d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-2468, 5.4.3]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete. [45CSR§§30-4.4. and 5.1.c.3.D.]
- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31. [45CSR§30-5.1.c.3.E.]
- 3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

US EPA:

Section Chief
U. S. Environmental Protection Agency, Region III
Enforcement and Compliance Assurance Division
Air, RCRA and Toxics Branch (3ED21)
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, PA 19103-2852

DAQ Compliance and Enforcement¹:

DEPAirQualityReports@wv.gov

¹For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality.
[45CSR§30-8.]

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:
DEPAirQualityReports@wv.gov

US EPA:
R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:
DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.

3.5.8. **Deviations.**

- a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:
 1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.
 2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.
 3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
 4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

- b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

[45CSR§30-5.1.c.3.B.]

- 3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

[45CSR§30-4.3.h.1.B.]

3.6. Compliance Plan

- 3.6.1. None.

3.7. Permit Shield

- 3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.
- 3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

- a. 45CSR19 - *Nonattainment New Source Review (NSR)* - The facility is located within an area classified as in attainment with respect to the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants.
- b. 40 C.F.R. 60 Subpart JJJJ – The engines (EN01 – EN03) are not subject to this subpart because they are compression ignition engines.
- c. 40 C.F.R. 60 Subpart OOOO –The facility is in the natural gas production, transmission, and distribution segment. The only potentially affected facilities under this rule were constructed, modified, or reconstructed prior to August 23, 2011. None of the newly installed tanks onsite meet the applicability requirements in 40 CFR §60.5365(e). Therefore, this subpart does not apply to the facility.
- d. 40 C.F.R. 60, Subpart OOOOa – This subpart applies to equipment installed after September 18, 2015. This facility has no equipment with applicable requirements under this subpart because there are no affected emissions units that have been installed after September 18, 2015.
- e. 40 C.F.R. 63 Subpart HHH – This subpart does not apply to the facility since the facility is not a major source of HAPs.
- f. 40 C.F.R. 63 Subpart DDDDD – The boilers (BL01 & BL03) are not subject to this subpart since the facility is not a major source of HAPs.
- g. 40 C.F.R. 63 Subpart JJJJJ – The boilers (BL01 & BL03) are not subject to this subpart since they are “gas-fired boilers”, which are excluded per §63.11195.
- h. 40 C.F.R. 64 – the natural gasoline Tank TK10 has a VOC emission limit of 1.4 TPY, and an internal floating roof to reduce VOC emissions by 95%. As per §64.1 “for the purpose of this part, a control device does not include passive control measures that act to prevent pollutants from forming such as the use of seals, lids, or roofs to prevent the release of pollutants”, therefore CAM is not applicable to the gasoline Tank TK10 because the internal floating roof is not defined as a control device under CAM.

4.0. Source-Specific Requirements • HEP Boilers [BL01, BL03]

4.1. Limitations and Standards

- 4.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.
[45CSR§2-3.1]
- 4.1.2. No person shall cause, suffer, allow or permit the discharge of particulate matter into the open air in excess of the following: 2.259 pounds per hour for BL01 and 2.268 pounds per hour for BL03.
[45CSR§2-4.1.b]
- 4.1.3. No person shall cause, suffer, allow or permit the discharge of sulfur dioxide into the open air in excess of the following: 77.81 pounds per hour for BL01 and 78.12 pounds per hour for BL03.
[45CSR§10-3.1.e]

4.2. Monitoring Requirements

- 4.2.1. None.

4.3. Testing Requirements

- 4.3.1. None.

4.4. Recordkeeping Requirements

- 4.4.1. For fuel burning unit(s) which burn only pipeline quality natural gas, such records shall include, but not be limited to, the date and time of start-up and shutdown, and the quantity of fuel consumed on a monthly basis.
[45CSR§2A-7.1.a.1]
- 4.4.2. The owner or operator shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each fuel burning unit in a manner to be established by the Director. Such records are to be maintained on-site and made available to the Director or his duly authorized representative upon request.
[45CSR§2-8.3.c]
- 4.4.3. Pursuant to 40 CFR 60 Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, the facility is subject to the following recordkeeping requirements given below:

§60.48c Reporting and recordkeeping requirements.

- (g) (1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.
- (2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

- (i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

[45CSR16 and 40CFR§§60.48c(g) and (i)][BL03]

4.5. Reporting Requirements

- 4.5.1. None.

4.6. Compliance Plan

- 4.6.1. None.

5.0. Source-Specific Requirements • HEP Hot Oil Heater [HTR3]

5.1. Limitations and Standards

- 5.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average. **[45CSR§2-3.1 and 45CSR13, R13-2468, 5.1.4]**
- 5.1.2. Emissions from the 70 MMBtu/hr hot oil heater 004-05 shall not exceed the following:

Pollutant	Emissions	
	lb/hr	tons/yr
CO	2.8	12.26
NO _x	3.5	15.33
PM	0.53*	2.33
VOC	0.7	3.07

* This limit is more stringent than PM standard in 45 CSR §2-4.1.b.

Compliance with the PM emissions limit listed above assures compliance with the allowable weight emissions limit established in 45CSR§2-4.1.

[45CSR13, R13-2468, 5.1.1 and 45CSR§2-4.1]

- 5.1.3. The hot oil heater (004-05) shall either combust natural gas or process gas generated from the extraction plant. The amount of fuel-combusted by the heater shall not exceed 70,000 cubic feet per hour, or 6.13×10^8 cubic feet per year. Compliance with this limit satisfies compliance with the visible emission standard of Condition 5.1.1, and the allowable particulate matter emission rate of 45 CSR §2-4.1.b. **[45CSR13, R13-2468, 5.1.2]**
- 5.1.4. The fuel for the hot oil heater (004-05) shall not have a total sulfur concentration of greater than 20 grains per 100 dry standard cubic feet of gas. Compliance with this limit shall be determined by collecting and analyzing gas samples to determine the hydrogen sulfide content for the fuel gas. At the minimum, such sampling and analysis shall be conducted once per calendar year.

Compliance with this streamlined requirement will assure compliance with requirements of 45CSR§10-3.1 and 45CSR§10-5.1.

[45 CSR §10-3.1, 45CSR§10-5.1, and 45 CSR §10A-2.7 and 45CSR13, R13-2468, 5.1.3]

5.2. Monitoring Requirements

- 5.2.1. The permittee shall determine the amount of fuel consumed by the process heater identified as 004-05 for each month and the hours that the process heater operated during the month. Such records shall be maintained in accordance with Condition 3.4.2. **[45CSR16, 40 CFR §60.48c(g)(2); 45 CSR §§2-8.3.c. & d.; and 45 CSR §§10-8.3.c. & d.; 45CSR13, R13-2468, 5.2.4]**

5.3. Testing Requirements

5.3.1. None.

5.4. Recordkeeping Requirements

5.4.1. For the purpose of determining compliance with the maximum fuel limits set forth in Condition 5.1.3, the permittee shall maintain a monthly record of the quantity of fuel (natural gas or fuel gas) burned by the heater and the hours of operation. Such records shall be maintained in accordance with Condition 3.4.2. **[45 CSR §2-8.3.c, 45 CSR §2A-7.1.a.1 and 45CSR13, R13-2468, 5.4.6]**

5.5. Reporting Requirements

5.5.1. None.

5.6. Compliance Plan

5.6.1. None.

6.0. Source-Specific Requirements • HEP Backup Generators [AUX02, AUX03, AUX04], and Fire Water Heaters [FW-1 and FW-3]

6.1. Limitations and Standards

6.1.1. The backup generator 002-02 shall not operate more than 500 hours per year. Compliance with this limit shall be determined based on 12 month rolling total. [45CSR13, R13-2468, 6.1.1] [AUX02]

6.1.2. Pursuant to 40 CFR 63 Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines, the facility is subject to the following limitations and standards given below:

§ 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart. [45CSR34, 40 C.F.R. 63 Subpart ZZZZ §63.6603(a)]

Table 2d to Subpart ZZZZ of Part 63— Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
5. Emergency stationary SI RICE [AUX02, AUX03, AUX04] ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

¹Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

²If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved.

Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which 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.

[45CSR34, 40 C.F.R. 63 Subpart ZZZZ §63.6605] [AUX02, AUX03, AUX04]

§ 63.6625 *What are my monitoring, installation, collection, operation, and maintenance requirements?*

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(3) An existing emergency stationary RICE located at an area source of HAP emissions; [AUX02, AUX03, AUX04]

(f) If you own or operate an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed. [AUX02, AUX03, AUX04]

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Table 2d to this subpart apply. [AUX02, AUX03, AUX04]

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in item 5 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Table 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [AUX02, AUX03, AUX04]

[45CSR34, 40 C.F.R. 63 Subpart ZZZZ §63.6625]

§63.6640 *How do I demonstrate continuous compliance with the emission limitations, operating limitations and other requirements?*

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation and other requirements in Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart. [AUX02, AUX03, AUX04]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
9.Existing emergency stationary RICE located at an area source of HAP [AUX02, AUX03, AUX04]	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. [AUX02, AUX03, AUX04]

(e) You must also report each instance in which you did not meet the requirements in Table 8 (General Provisions) to this subpart that apply to you. [AUX02, AUX03, AUX04]

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

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

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraph (f)(2)(i) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(4) Emergency stationary RICE located at area sources of HAP 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 and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per 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.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[45CSR34, 40 C.F.R. 63 Subpart ZZZZ §§63.6640 (a), (b), (e), (f)(1), (f)(2), (f)(4)] [AUX02, AUX03, AUX04]

§63.6665 *What parts of the General Provisions apply to me?*

Table 8 to subpart ZZZZ shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

[45CSR34, 40 C.F.R. 63 Subpart ZZZZ §63.6665 and §63.6645(a)(5)] [AUX02, AUX03, AUX04]

6.1.3. The fire water heaters identified as T-FW-1 and T-FW-3 shall be limited to being fired with natural gas. Compliance with this fuel restriction shall satisfy compliance with the visible emission limit of 45CSR§2-3.1.

[45CSR13, R13-2468, 6.1.2]

6.2. Monitoring Requirements

- 6.2.1. The permittee shall record the hours of operation of the backup generator (002-02) and maintain a 12 month rolling total on a monthly basis. Such records shall be maintained in accordance with Condition 3.4.2. [45CSR13, R13-2468, 6.2.1] [AUX02]

6.3. Testing Requirements

- 6.3.1. None

6.4. Recordkeeping Requirements

- 6.4.1. Pursuant to 40 CFR 63 Subpart ZZZZ *National Emission Standards for Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines*, the facility is subject to the following recordkeeping requirements below:

§ 63.6655 What records must I keep?

- (a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5) of this section. [AUX02, AUX03, AUX04]

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

- (d) You must keep the records required in Table 6 of this subpart (requirement 6.1.2) to show continuous compliance with each emission or operating limitation that applies to you. [AUX02, AUX03, AUX04]

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(2) An existing stationary emergency RICE. [AUX02, AUX03, AUX04]

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart (condition 6.1.2). [AUX02, AUX03, AUX04]

- (f) If you own or operate any of the stationary RICE in paragraph (f)(2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or

operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines. [AUX02, AUX03, AUX04]

§ 63.6660 *In what form and how long must I keep my records?*

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1). [AUX02, AUX03, AUX04]

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [AUX02, AUX03, AUX04]

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). [AUX02, AUX03, AUX04]

[45CSR34, 40 C.F.R. 63 Subpart ZZZZ §63.6655 (a), (d), (e) and (f); §63.6660]

6.5. Reporting Requirements

6.5.1. See footnote (2) of the Table 2d (Requirement 6.1.2).

6.5.2. If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v)-(vi) {Reserved}

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) 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). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

[45CSR34, 40 C.F.R. 63 Subpart ZZZZ, §63.6650(h)] [AUX04]

6.6. Compliance Plan

6.6.1. None.

7.0. Source-Specific Requirements • HEP Natural Gasoline Storage Tank [TK10]

7.1. Limitations and Standards

- 7.1.1. VOC emissions that are the result from working and breathing losses from Tank TK10 at the facility shall not exceed 1.4 tons per year. For the purpose of ensuring compliance with this emission limit, Tank TK10 shall be operated and maintained in accordance with the following:
- a. The vessel shall only store natural gasoline with a Reid Vapor Pressure of no greater than 15.5 psia.
 - b. The tank shall be equipped and maintained with an internal floating roof with two seals. The two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside the storage vessel. The floating roof shall float on the stored liquid at all times while the vessel is in service, except during initial filling and during those intervals when the storage vessels are completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
[40 CFR §§60.112b (a)(1)(i) and (ii)(B); 45CSR16]
 - c. Deck Fittings. Opening through the deck of the floating roof shall be equipped as described in the following:
 - i. Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface;
 - ii. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e. no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use;
 - iii. Each automatic bleeder vent and rim space vent shall be equipped with a gasket and are to be closed at all times when the roof is floating except when being floated off or landed on the roof leg supports;
 - iv. Each rim space vent shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting;
 - v. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening;
 - vi. Each opening for a sample well or deck drain (that empties into the stored liquid) may be equipped with a slit fabric seal or similar device that covers at least 90 percent of the opening, instead of a deck cover;
 - vii. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover; and

- viii. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

[40 CFR §§60.112b(a)(1)(iii) through (ix); 45CSR16]

[45CSR13, R13-2468, 5.1.5]

7.2. Monitoring Requirements

- 7.2.1. Prior to initial filling after the internal floating roof has been installed for the replacement vessel of Tank TK10, the permittee shall visually inspect the internal floating roof, the primary seal, and secondary seal for holes, tears, other openings or defects. The permittee shall repair all deficiencies prior to filling the tank. Record of such inspection shall identify the tank on which the inspection was performed, date of inspection, and condition of each component of the internal floating roof (seals, internal floating roof, and fittings). Such records shall be maintained in accordance with Condition 3.4.2.

[40 CFR §§60.113b(a)(1) and 60.115b(a)(2), 45CSR16 and 45CSR13, R13-2468, 5.2.1]

- 7.2.2. The permittee shall conduct inspections of the internal floating roof for Tank TK10 in accordance with one of the following procedures:

- a. At least once every 12 months after initial fill and thereafter, the permittee shall visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof. If the internal floating roof is not resting on the surface of the VOL inside the storage tank, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Director or Administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. **[40 CFR §§60.113b(a)(2) and (a)(3)(ii)]**

And whenever the vessel is emptied and degassed with intervals no greater than 10 years between inspections, the permittee shall visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL; or **[40 CFR §60.113b(a)(4)]**

- b. At least once every five years after initial fill and thereafter for Tank TK10 identified in Condition 7.1.1, the permittee shall visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. **[40 CFR §§60.113b(a)(3)(i) and (a)(4)]**

[45CSR16 and 45CSR13, R13-2468, 5.2.2]

- 7.2.3. For the purpose of ensuring compliance with the Reid Vapor Pressure limit of Condition 7.1.1.a, the permittee shall sample and determine the Reid Vapor Pressure of the natural gasoline stored in Tank TK10 at least once per calendar quarter. Such sampling and analysis shall be conducted in accordance with the most recent version of ASTM 5191 or an equivalent method. If the permittee takes more than one sample during the quarter, the permittee shall take the average of Reid Vapor Pressure of the samples.
[45CSR13, R13-2468, 5.2.3]

7.3. Testing Requirements

- 7.3.1. None.

7.4. Recordkeeping Requirements

- 7.4.1. The permittee shall maintain records of the tank throughput of natural gasoline, monthly at a minimum, but may record it more often at the discretion of the owner or operator. The throughput will be used, in addition to the TANKS program, to calculate the emissions of VOC hourly and annually. A twelve month running total shall be maintained to verify compliance with the annual emission limit. Each month a new twelve month total shall be calculated using the previous twelve months data. Records and calculations shall be maintained on site for a period of no less than five (5) years and shall be made available upon request to the Director or his/her duly authorized representative. **[45CSR§30-5.1.c.]**

- 7.4.2. The owner or operator of each storage vessel as specified in §60.112b(a) shall keep records and furnish reports as required by paragraphs (a) of this section depending upon the control equipment installed to meet the requirements of §60.112b.

- (a) After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

- (2) Keep a record of each inspection performed as required by §60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

[40 CFR §60.115b(a)(2) and 45CSR16]

- 7.4.3. The owner or operator of each storage vessel as specified in §60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. These records shall be kept for the life of the source.

[40 C.F.R. § 60.116b(b), 45CSR16 and 45CSR13, R13-2468, 5.4.4]

- 7.4.4. The owner or operator shall maintain a record of the volatile organic liquid stored, the period of storage, and the maximum true vapor pressure of that volatile organic liquid during the respected storage period. The maximum true vapor pressure shall be determined in accordance with §60.116b(e). These records shall be kept on site for at least 5 years.

[40 C.F.R. § 60.116b(c), 45CSR16 and 45CSR13, R13-2468, 5.4.5]

7.5. Reporting Requirements

- 7.5.1. The permittee shall notify the Director in writing at least 30 days prior to the filling or refilling of Tank TK10 for which an inspection is required by Condition 7.2.1 (Initial inspection) or Condition 7.2.2 (5 year or 10 year inspection) to afford the Director the opportunity to have an observer present.

If the 5 or 10 year inspection required by Condition 7.2.2 is not planned and the permittee could not have known 30 days in advance of refilling, the permittee shall notify the Director at least 7 days prior to the

refilling of Tank TK10. Such notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Director at least 7 days prior to the refilling.

All records and associated documentation of such notification(s) shall be maintained in accordance with Condition 3.4.2.

[40 CFR §60.113b(a)(5), 45CSR16 and 45CSR13, R13-2468, 5.5.1]

- 7.5.2. During any of the required inspections as outlined in Condition 7.2.2 that the permittee detected conditions meeting as described in Condition 7.2.2.a or detects holes or tears in the seal or seal fabric, or defects in the internal floating roof, the permittee shall submit a copy of the inspection report to the Director within 30 days of such inspection. Such report shall identify the nature of the defect, reason the defect did not meet the specification as outlined in either Condition 7.1.1 or Condition 7.2.2, date Tank TK10 was emptied if required, the nature of and date repair was made. Records of such submittals shall be maintained in accordance with Condition 3.4.2.

[40 C.F.R. §§60.115b(a)(3) & (a)(4), 45CSR16 and 45CSR13, R13-2468, 5.5.2]

7.6. Compliance Plan

- 7.6.1. None.

8.0. Source-Specific Requirements • HEP 40 C.F.R. 60, Subpart KKK and Subpart VV (as applicable) (LDAR)

8.1. Standards and Monitoring Requirements

The following process areas that contain equipment subject under this section are: the Inlet Area, Hastings Electric Compressor Station (excluding equipment only handling residue gas), Hasting Extraction Plant, and NGL Storage Area to include the liquid return line from Galmish Loading Facility.

The facility may, at its option, utilize an alternative work practice (AWP) for monitoring equipment for leaks, which is codified at 40 CFR Part 60, Subpart A, §60.18(g)-(i). In accordance with 40 CFR §60.18(g), the AWP may be used in lieu of the Method 21 monitoring requirements of the applicable regulation, except for those that apply to:

- Closed vent systems;
- Equipment designated as leakless;
- Equipment identified as having no detectable emissions, as indicated by an instrument reading of 500 parts per million (ppm) above background.

When using the AWP, the requirements of the applicable regulation that are specific to Method 21 do not apply, except as noted above. Equipment specification and other non-Method 21 requirements in the applicable subpart continue to apply.

This facility has the option to utilize the AWP to monitor equipment.

- 8.1.1. Except as provided in 40 C.F.R. §§ 60.632(b) and (c), the permittee is responsible for thoroughly inspecting the facility, or part of the facility, for the presence of equipment leaks of volatile organic compounds and for complying with 40 C.F.R. §§ 60.632, 60.635 and 60.636. The pertinent sections of 40 CFR 60 **Subpart KKK** applicable to this facility include the following:

§ 60.632 Standards.

- (a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of §§60.482-1 (a), (b), and (d) and 60.482-2 through 60.482-10, except as provided in §60.633, as soon as practicable, but no later than 180 days after initial startup. **[45CSR16, 40 C.F.R. § 60.632(a), Subpart KKK]**
- (b) An owner or operator may elect to comply with the requirements of §§60.483-1 and 60.483-2. **[45CSR16, 40 C.F.R. § 60.632(b), Subpart KKK]**
- (c) An owner or operator may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in this subpart. In doing so, the owner or operator shall comply with requirements of §60.634 of this subpart. **[45CSR16, 40 C.F.R. § 60.632(c), Subpart KKK]**

§ 60.633 Exceptions.

- (a) Each owner or operator subject to the provisions of this subpart KKK may comply with the following exceptions to the provisions of subpart VV.
- (b) (1) Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in §60.485(b) except as provided in §60.632(c), paragraph(b)(4) of §60.633, and §60.482-4 (a) through (c) of subpart VV.

- (2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
- (3)(i) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in §60.482-9.
- (ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
- (4)(i) Any pressure relief device that is located in a nonfractionating plant that is monitored only by nonplant personnel may be monitored after a pressure release the next time the monitoring personnel are on site, instead of within 5 days as specified in paragraph (b)(1) of this section and §60.482-4(b)(1) of subpart VV.
- (ii) No pressure relief device described in paragraph (b)(4)(i) of this section shall be allowed to operate for more than 30 days after a pressure release without monitoring.
- (c) Sampling connection systems are exempt from the requirements of §60.482-5.
- (d) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more of field gas are exempt from the routine monitoring requirements of §§60.482-2(a)(1) and 60.482-7(a), and paragraph (b)(1) of this section.
- (e) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service within a process unit that is located in the Alaskan North Slope are exempt from the routine monitoring requirements of §§60.482-2(a)(1), 60.482-7(a), and paragraph (b)(1) of this section.
- (f) Reciprocating compressors in wet gas service are exempt from the compressor control requirements of §60.482-3.
- (g) Flares used to comply with this subpart shall comply with the requirements of §60.18.
- (h) An owner or operator may use the following provisions instead of §60.485(e):
- (1) Equipment is in heavy liquid service if the weight percent evaporated is 10 percent or less at 150 °C (302 °F) as determined by ASTM Method D86-78, 82, 90, 95, or 96 (incorporated by reference as specified in §60.17).
- (2) Equipment is in light liquid service if the weight percent evaporated is greater than 10 percent at 150 °C (302 °F) as determined by ASTM Method D86-78, 82, 90, 95, or 96 (incorporated by reference as specified in §60.17)

[45CSR16, 40 C.F.R. §60.633, Subpart KKK]

- 8.1.2. Each owner or operator subject to the provisions of 40 CFR 60 **Subpart KKK** shall comply with the requirements of paragraphs (b) and (c) of 40 C.F.R. § 60.635 in addition to the requirements of §60.486.

[45CSR16, 40 C.F.R. §60.635(a), Subpart KKK]

- 8.1.3. Although this facility is not subject to 40 C.F.R. 60 Subpart VV, many sections of Subpart VV are incorporated by reference in 40 CFR 60 Subpart KKK. The pertinent sections of 40 C.F.R. 60 Subpart VV applicable to this facility include, but not limited to, the following requirements (with the exceptions provided in 8.1.1).

8.1.3.1. **PUMPS in light liquid service.**

- a. (1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in § 60.485(b), except as provided in § 60.482-1(c) and paragraphs (d), (e), and (f) of § 60.482-2. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in §60.482-1(c) and (f) and paragraphs (d), (e), and (f) of this section.

[45CSR16, 40 C.F.R. § 60.482-2(a)(1)]

- (2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

[45CSR16, 40 C.F.R. § 60.482-2(a)(2); and 45CSR13, R13-2468, 9.1.1]

- b. (1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

[45CSR16, 40 C.F.R. § 60.482-2(b)(1); and 45CSR13, R13-2468, 9.1.1]

- (2) If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either paragraph (b)(2)(i) or (ii) of this section. This requirement does not apply to a pump that was monitored after a previous weekly inspection if the instrument reading for that monitoring event was less than 10,000 ppm and the pump was not repaired since that monitoring event.

(i) Monitor the pump within 5 days as specified in §60.485(b). If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. The leak shall be repaired using the procedures in paragraph (c) of this section. **[45CSR16, 40 CFR §60.482-2(b)(2)(i); and 45CSR13, R13-2468, 9.2.1.a]**

(ii) Designate the visual indications of liquids dripping as a leak, and repair the leak within 15 days of detection by eliminating the visual indications of liquids dripping. **[45CSR16, 40 CFR §60.482-2(b)(2)(ii); and 45CSR13, R13-2468, 9.2.1.b]**

Records of such inspections, monitoring, and repairs shall be maintained in accordance with Condition 3.4.2.

[45CSR16, 40 CFR §§60.632(a), 60.635(a), 60.482-2(b)(2), 60.486(b); and 45CSR13, R13-2468, 9.2.1]

- c. (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482-9.

[45CSR16, 40 C.F.R. § 60.482-2(c)(1); and 45CSR13, R13-2468, 9.1.1.a]

- (2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs (c)(2)(i) and (ii) of this section, where practicable.

i. Tightening the packing gland nuts;

ii. Ensuring that the seal flush is operating at design pressure and temperature.

[45CSR16, 40 C.F.R. § 60.482-2(c)(2); and 45CSR13, R13-2468, 9.1.1.b]

8.1.3.2. **PRESSURE RELIEF DEVICES in gas/vapor service.**

- a. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in § 60.485(c).

[45CSR16, 40 C.F.R. § 60.482-4(a); and 45CSR13, R13-2468, 9.1.3]

- b. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in § 60.482-9 (condition 8.1.3.7).
[45CSR16, 40 C.F.R. § 60.482-4(b)(1); and 45CSR13, R13-2468, 9.1.3]
- c. Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in § 60.485(b) except as provided in § 60.632(c), §60.633(b)(4) and § 60.482-4 (a) through (c) of subpart VV. **[45CSR16, 40 C.F.R. § 60.633(b)(1), Subpart KKK]**
 - i. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
[45CSR16, 40 C.F.R. § 60.633(b)(2), Subpart KKK]
 - ii. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in § 60.482-9.
[45CSR16, 40 C.F.R. § 60.633(b)(3)(i), Subpart KKK]
- d. No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in §60.485(c).
[45CSR16, 40 C.F.R. § 60.482-4(b)(2); and 45CSR13, 13-2468, 9.2.3]
- e. Any pressure relief device equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of Condition 8.1.3.2.a and b, provided that after each pressure release event, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in § 60.482-9 (condition 8.1.3.7).
[45CSR16, 40 CFR §§60.482-4(d)(1) and (d)(2); and 45CSR13, 13-2468, 9.1.4]

8.1.3.3. **COMPRESSORS (40 CFR §60.482-3).** Each centrifugal compressor in wet gas service or VOC service shall be equipped, maintained and operated with a dry gas seal system that prevents leakage of VOC to the atmosphere.

- a. The seal system shall be operated with the barrier fluid (seal gas for the primary seal) operated at a pressure that is greater than the compressor suction pressure.
[45CSR16, 40 CFR §60.482-3(b)(1); and 45CSR13, 13-2468, 9.1.2.a]
- b. The barrier fluid for this seal system may use the residue gas from the extraction plant as long as the residue does not meet the definition of VOC service as defined as a stream with a VOC content of 10.0 percent or greater by weight.
[45CSR16, 40 CFR §§60.482-3(c); and 45CSR13, 13-2468, 9.1.2.b]
- c. The permittee shall determine the criterion that indicates failure of the seal system, barrier fluid system, or both. **[45CSR16, 40 CFR §60.482-3(e)(2); and 45CSR13, 13-2468, 9.1.2.c]**
- d. The permittee shall install and maintain a sensor(s) to monitor the criterion that indicates failure of the seal system, barrier fluid system, or both.
[45CSR16, 40 CFR §60.482-3(d); and 45CSR13, 13-2468, 9.1.2.d]
- e. If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under 8.1.3.3.c, a leak is detected.
[45CSR16, 40 CFR §60.482-3(f); and 45CSR13, 13-2468, 9.1.2.e]

- f. The permittee shall repair the detected leak as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR §60.482-9.
[45CSR16, 40 CFR §60.482-3(g)(1); and 45CSR13, 13-2468, 9.1.2.f]
- g. The permittee shall make the first attempt at repair no later than 5 calendar days after each leak is detected. **[45CSR16, 40 CFR §60.482-3(g)(2); and 45CSR13, 13-2468, 9.1.2.g]**

8.1.3.4. OPEN-ENDED VALVES OR LINES.

- a. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1(c) and paragraphs (d) and (e) of this section.
[45CSR16, 40 C.F.R. § 60.482-6(a)(1); and 45CSR13, R13-2468, 9.1.5]
- b. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.
[45CSR16, 40 C.F.R. § 60.482-6(a)(2); and 45CSR13, R13-2468, 9.1.5]
- c. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
[45CSR16, 40 C.F.R. § 60.482-6(b)]
- d. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) at all other times.
[45CSR16, 40 C.F.R. § 60.482-6 (c)]
- e. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b), and (c) of this section.
[45CSR16, 40 C.F.R. § 60.482-6(d)]
- f. Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.
[45CSR16, 40 C.F.R. § 60.482-6(e)]

8.1.3.5. VALVES in gas/vapor service and in light liquid service.

- a. (1) Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485(b) and shall comply with paragraphs (b) through (e), except as provided in paragraphs (f), (g), and (h), §60.483-1,2, and § 60.482-1(c).
[45CSR16, 40 C.F.R. § 60.482-7(a)(1)]

(2) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to paragraphs (a)(2)(i) or (ii), except for a valve that replaces a leaking valve and except as provided in paragraphs (f), (g), and (h) of this section, §60.482-1(c), and §§60.483-1 and 60.483-2.
 - i. Monitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.

[45CSR16, 40 C.F.R. §§ 60.482-7(a)(2) and (a)(2)(i); and 45CSR13, R13-2468, 9.2.4.b]

- b. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
[45CSR16, 40 C.F.R. § 60.482-7(b); and 45CSR13, R13-2468, 9.1.6]
- c. (1) i. Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.

[45CSR16, 40 C.F.R. § 60.482-7(c)(1)(i); and 45CSR13, R13-2468, 9.2.4.a]

ii. As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into 2 or 3 subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.

[45CSR16, 40 C.F.R. § 60.482-7(c)(1)(ii)]

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months

[45CSR16, 40 C.F.R. § 60.482-7(c)(2)]

- d. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §60.482-9.

[45CSR16, 40 C.F.R. § 60.482-7(d)(1); and 45CSR13, R13-2468, 9.1.6.a]

8.1.3.6. **PUMPS AND VALVES in heavy liquid service, PRESSURE RELIEF DEVICES in light liquid or heavy liquid service, and CONNECTORS.**

- a. Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors shall be monitored within 5 days by the method specified in § 60.485(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. [45CSR16, 40 C.F.R. § 60.482-8(a); 45CSR13, R13-2468, 9.1.7]

- i. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

[45CSR16, 40 C.F.R. § 60.482-8(b); and 45CSR13, R13-2468, 9.1.7.c]

- b. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 60.482-9 (condition 8.1.3.7).

[45CSR16, 40 C.F.R. § 60.482-8(c)(1); and 45CSR13, R13-2468, 9.1.7.c]

- c. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

[45CSR16, 40 C.F.R. § 60.482-8(c)(2); and 45CSR13, R13-2468, 9.1.7.c]

8.1.3.7. **DELAY OF REPAIR.**

- a. Delay of repair of equipment for which leaks have been detected will be allowed if the repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

[45CSR16, 40 C.F.R. § 60.482-9(a); and 45CSR13, R13-2468, 9.1.8]

- b. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

[45CSR16, 40 C.F.R. § 60.482-9(b); and 45CSR13, R13-2468, 9.1.8.a]

- c. Delay of repair for valves will be allowed if:

[45CSR16, 40 C.F.R. §60.482-9(c); and 45CSR13, R13-2468, 9.1.8.b]

- i. The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and **[45CSR16, 40 C.F.R. § 60.482-9(c)(1); and 45CSR13, R13-2468, 9.1.8.b.i]**
- ii. When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §60.482-10.
[45CSR16, 40 C.F.R. § 60.482-9(c)(2); and 45CSR13, R13-2468, 9.1.8.b.ii]
- d. Delay of pumps will be allowed if:
[45CSR16, 40 C.F.R. § 60.482-9(d); and 45CSR13, R13-2468, 9.1.8.c]
 - i. Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and **[45CSR16, 40 C.F.R. § 60.482-9(d)(1); and 45CSR13, R13-2468, 9.1.8.c.i]**
 - ii. Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.
[45CSR16, 40 C.F.R. § 60.482-9(d)(2); and 45CSR13, R13-2468, 9.1.8.c.ii]
- e. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.
[45CSR16, 40 C.F.R. § 60.482-9(e); and 45CSR13, R13-2468, 9.1.8.d]
- f. When delay of repair is allowed for a leaking pump or valve that remains in service, the pump or valve may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.
[45CSR16, 40 C.F.R. § 60.482-9(f); and 45CSR13, R13-2468, 9.1.8.e]

8.1.3.8. CLOSED VENT SYSTEMS AND CONTROL DEVICES.

- a. Owners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of §60.482-10.
[45CSR16, 40 C.F.R. § 60.482-10(a)]
- b. Owners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.
[45CSR16, 40 C.F.R. § 60.482-10(e)]

8.1.3.9. ALTERNATIVE STANDARDS FOR VALVES -- skip period leak detection and repair.

- a. An owner or operator may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.
[45CSR16, 40 C.F.R. § 60.483-1(a)]
- b. The following requirements shall be met if an owner or operator wishes to comply with an allowable percentage of valves leaking:
[45CSR16, 40 C.F.R. § 60.483-1(b)]
 - i. An owner or operator must notify the Director that the owner or operator has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in § 60.487(b).
[45CSR16, 40 C.F.R. § 60.483-1(b)(1)]

- ii. A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times as requested by the Director.
[45CSR16, 40 C.F.R. § 60.483-1(b)(2)]
- iii. If a valve leak is detected, it shall be repaired in accordance with § 60.482-7(d) and (e).
[45CSR16, 40 C.F.R. § 60.483-1(b)(3)]
- c. An owner or operator may elect to comply with one of the alternative work practices specified in paragraphs (b)(2) and (3) of § 60.483-2.
[45CSR16, 40 C.F.R. §60.483-2(a)(1)]
- d. An owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in §60.487(b).
[45CSR16, 40 C.F.R. §60.483-2(a)(2)]
- e. An owner or operator shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in §60.482-7.
[45CSR16, 40 C.F.R. §60.483-2(b)(1)]
- f. After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 an owner or operator may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.
[45CSR16, 40 C.F.R. § 60.483-2(b)(2)]
- g. After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.
[45CSR16, 40 C.F.R. §60.483-2(b)(3)]
- h. If the percent of valves leaking is greater than 2.0, the owner or operator shall comply with the requirements as described in §60.482-7a but can again elect to use this section.
[45CSR16, 40 C.F.R. §60.483-2(b)(4)]
- i. The percent of valves leaking shall be determined as described in §60.485a(h).
[45CSR16, 40 C.F.R. §60.483-2(b)(5)]
- j. An owner or operator must keep a record of the percent of valves found leaking during each leak detection period. **[45CSR16, 40 C.F.R. §60.483-2(b)(6)]**
- k. A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for a process unit following one of the alternative standards in this section must be monitored in accordance with §60.482-7a(a)(2)(i) or (ii) before the provisions of this section can be applied to that valve.
[45CSR16, 40 C.F.R. §60.483-2(b)(7)]

8.2. Monitoring Requirements

- 8.2.1. The permittee shall monitor each valve that is either in gas/vapor service or in light liquid service using methods specified in 40 CFR §60.485(b) on a monthly basis except in accordance with the conditions 8.1.3.5.a(2), 8.1.3.5.c(1)(i), 8.2.2 and the following:
 - a. Any valve that is designated, as described in 40 CFR §60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of 40 CFR §60.482-7(a) if:

- i. The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR §60.482-7, and
- ii. The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

[45CSR16, 40 CFR §60.482-7(g); and 45CSR13, R13-2468, 9.2.4.c]

- b. Any valve that is designated, as described in §60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) if:

(1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

(2) The process unit within which the valve is located either becomes an affected facility through §60.14 or §60.15 or the owner or operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

Records of such inspections, monitoring, and repairs shall be maintained in accordance with Condition 3.4.2.

[45CSR16, 40 CFR §§60.482-7(h) and (h)(1) through (h)(3); and 45CSR13, R13-2468, 9.2.4.d]

- 8.2.2. If the facility chooses to utilize the Alternate Work Practice in 40 CFR §60.18(g)-(i) (allowing for the use of optical gas imaging cameras in lieu of Method 21), monitoring frequencies and practices are adjusted in accordance with the following regulations:

(g) *Alternative work practice for monitoring equipment for leaks.* Paragraphs (g), (h), and (i) of this section apply to all equipment for which the applicable subpart requires monitoring with a 40 CFR part 60, appendix A-7, Method 21 monitor, except for closed vent systems, equipment designated as leakless, and equipment identified in the applicable subpart as having no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. An owner or operator may use an optical gas imaging instrument instead of a 40 CFR part 60, appendix A-7, Method 21 monitor. Requirements in the existing subparts that are specific to the Method 21 instrument do not apply under this section. All other requirements in the applicable subpart that are not addressed in paragraphs (g), (h), and (i) of this section apply to this standard. For example, equipment specification requirements, and non-Method 21 instrument recordkeeping and reporting requirements in the applicable subpart continue to apply. The terms defined in paragraphs (g)(1) through (5) of this section have meanings that are specific to the alternative work practice standard in paragraphs (g), (h), and (i) of this section.

- (1) ***Applicable subpart*** means the subpart in 40 CFR parts 60, 61, 63, or 65 that requires monitoring of equipment with a 40 CFR part 60, appendix A-7, Method 21 monitor.
- (2) ***Equipment*** means pumps, valves, pressure relief valves, compressors, open-ended lines, flanges, connectors, and other equipment covered by the applicable subpart that require monitoring with a 40 CFR part 60, appendix A-7, Method 21 monitor.
- (3) ***Imaging*** means making visible emissions that may otherwise be invisible to the naked eye.

- (4) **Optical gas imaging instrument** means an instrument that makes visible emissions that may otherwise be invisible to the naked eye.
 - (5) **Repair** means that equipment is adjusted, or otherwise altered, in order to eliminate a leak.
 - (6) **Leak** means:
 - (i) Any emissions imaged by the optical gas instrument;
 - (ii) Indications of liquids dripping;
 - (iii) Indications by a sensor that a seal or barrier fluid system has failed; or
 - (iv) Screening results using a 40 CFR part 60, appendix A-7, Method 21 monitor that exceed the leak definition in the applicable subpart to which the equipment is subject.
- (h) The alternative work practice standard for monitoring equipment for leaks is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, appendix A-7, Method 21 monitor.
- (1) An owner or operator of an affected source subject to CFR parts 60, 61, 63, or 65 can choose to comply with the alternative work practice requirements in paragraph (i) of this section instead of using the 40 CFR part 60, appendix A-7, Method 21 monitor to identify leaking equipment. The owner or operator must document the equipment, process units, and facilities for which the alternative work practice will be used to identify leaks.
 - (2) Any leak detected when following the leak survey procedure in paragraph (i)(3) of this section must be identified for repair as required in the applicable subpart.
 - (3) If the alternative work practice is used to identify leaks, re-screening after an attempted repair of leaking equipment must be conducted using either the alternative work practice or the 40 CFR part 60, appendix A-7, Method 21 monitor at the leak definition required in the applicable subpart to which the equipment is subject.
 - (4) The schedule for repair is as required in the applicable subpart.
 - (5) When this alternative work practice is used for detecting leaking equipment, choose one of the monitoring frequencies listed in Table 1 to subpart A of this part in lieu of the monitoring frequency specified for regulated equipment in the applicable subpart. Reduced monitoring frequencies for good performance are not applicable when using the alternative work practice.
 - (6) When this alternative work practice is used for detecting leaking equipment the following are not applicable for the equipment being monitored:
 - (i) Skip period leak detection and repair;
 - (ii) Quality improvement plans; or
 - (iii) Complying with standards for allowable percentage of valves and pumps to leak.

(7) When the alternative work practice is used to detect leaking equipment, the regulated equipment in paragraph (h)(1)(i) of this section must also be monitored annually using a 40 CFR part 60, appendix A-7, Method 21 monitor at the leak definition required in the applicable subpart. The owner or operator may choose the specific monitoring period (for example, first quarter) to conduct the annual monitoring. Subsequent monitoring must be conducted every 12 months from the initial period. Owners or operators must keep records of the annual Method 21 screening results, as specified in paragraph (i)(4)(vii) of this section.

(i) An owner or operator of an affected source who chooses to use the alternative work practice must comply with the requirements of paragraphs (i)(1) through (i)(5) of this section.

(1) Instrument Specifications. The optical gas imaging instrument must comply with the requirements in (i)(1)(i) and (i)(1)(ii) of this section.

(i) Provide the operator with an image of the potential leak points for each piece of equipment at both the detection sensitivity level and within the distance used in the daily instrument check described in paragraph (i)(2) of this section. The detection sensitivity level depends upon the frequency at which leak monitoring is to be performed.

(ii) Provide a date and time stamp for video records of every monitoring event.

(2) Daily Instrument Check. On a daily basis, and prior to beginning any leak monitoring work, test the optical gas imaging instrument at the mass flow rate determined in paragraph (i)(2)(i) of this section in accordance with the procedure specified in paragraphs (i)(2)(ii) through (i)(2)(iv) of this section for each camera configuration used during monitoring (for example, different lenses used), unless an alternative method to demonstrate daily instrument checks has been approved in accordance with paragraph (i)(2)(v) of this section.

(i) Calculate the mass flow rate to be used in the daily instrument check by following the procedures in paragraphs (i)(2)(i)(A) and (i)(2)(i)(B) of this section.

(A) For a specified population of equipment to be imaged by the instrument, determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, within the distance to be used in paragraph (i)(2)(iv)(B) of this section, at or below the standard detection sensitivity level.

(B) Multiply the standard detection sensitivity level, corresponding to the selected monitoring frequency in Table 1 of subpart A of this part, by the mass fraction of detectable chemicals from the stream identified in paragraph (i)(2)(i)(A) of this section to determine the mass flow rate to be used in the daily instrument check, using the following equation.

$$E_{dic} = (E_{sds}) \sum_{i=1}^k x_i$$

Where:

E_{dic} = Mass flow rate for the daily instrument check, grams per hour

x_i = Mass fraction of detectable chemical(s) i seen by the optical gas imaging instrument, within the distance to be used in paragraph (i)(2)(iv)(B) of this section, at or below the standard detection sensitivity level, E_{sds} .

E_{sds} = Standard detection sensitivity level from Table 1 to subpart A, grams per hour

k = Total number of detectable chemicals emitted from the leaking equipment and seen by the optical gas imaging instrument.

(ii) Start the optical gas imaging instrument according to the manufacturer's instructions, ensuring that all appropriate settings conform to the manufacturer's instructions.

(iii) Use any gas chosen by the user that can be viewed by the optical gas imaging instrument and that has a purity of no less than 98 percent.

(iv) Establish a mass flow rate by using the following procedures:

(A) Provide a source of gas where it will be in the field of view of the optical gas imaging instrument.

(B) Set up the optical gas imaging instrument at a recorded distance from the outlet or leak orifice of the flow meter that will not be exceeded in the actual performance of the leak survey. Do not exceed the operating parameters of the flow meter.

(C) Open the valve on the flow meter to set a flow rate that will create a mass emission rate equal to the mass rate specified in paragraph (i)(2)(i) of this section while observing the gas flow through the optical gas imaging instrument viewfinder. When an image of the gas emission is seen through the viewfinder at the required emission rate, make a record of the reading on the flow meter.

(v) Repeat the procedures specified in paragraphs (i)(2)(ii) through (i)(2)(iv) of this section for each configuration of the optical gas imaging instrument used during the leak survey.

(vi) To use an alternative method to demonstrate daily instrument checks, apply to the Administrator for approval of the alternative under § 60.13(i).

(3) Leak Survey Procedure. Operate the optical gas imaging instrument to image every regulated piece of equipment selected for this work practice in accordance with the instrument manufacturer's operating parameters. All emissions imaged by the optical gas imaging instrument are considered to be leaks and are subject to repair. All emissions visible to the naked eye are also considered to be leaks and are subject to repair.

(4) Recordkeeping. You must keep the records described in paragraphs (i)(4)(i) through (i)(4)(vii) of this section:

(i) The equipment, processes, and facilities for which the owner or operator chooses to use the alternative work practice.

(ii) The detection sensitivity level selected from Table 1 to subpart A of this part for the optical gas imaging instrument.

(iii) The analysis to determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, as specified in paragraph (i)(2)(i)(A) of this section.

(iv) The technical basis for the mass fraction of detectable chemicals used in the equation in paragraph (i)(2)(i)(B) of this section.

(v) The daily instrument check. Record the distance, per paragraph (i)(2)(iv)(B) of this section, and the flow meter reading, per paragraph (i)(2)(iv)(C) of this section, at which the leak was imaged. Keep a video record of the daily instrument check for each configuration of the optical gas imaging instrument used during the leak survey (for example, the daily instrument check must be conducted for each lens used). The video record must include a time and date stamp for each daily instrument check. The video record must be kept for 5 years.

(vi) Recordkeeping requirements in the applicable subpart. A video record must be used to document the leak survey results. The video record must include a time and date stamp for each monitoring event. A video record can be used to meet the recordkeeping requirements of the applicable subparts if each piece of regulated equipment selected for this work practice can be identified in the video record. The video record must be kept for 5 years.

(vii) The results of the annual Method 21 screening required in paragraph (h)(7) of this section. Records must be kept for all regulated equipment specified in paragraph (h)(1) of this section. Records must identify the equipment screened, the screening value measured by Method 21, the time and date of the screening, and calibration information required in the existing applicable subpart.

- (5) Reporting. Submit the reports required in the applicable subpart. Submit the records of the annual Method 21 screening required in paragraph (h)(7) of this section to the Administrator via e-mail to *CCG-AWP@EPA.GOV*.

[45CSR16, 40 CFR §§60.18(g), (h), (i)]

- 8.2.3. Monitoring to verify repair (as per condition 8.1.3.7.a) must occur within 15 days after startup of the process unit.

Records of such monitoring shall be maintained in accordance with Condition 3.4.2.
[45CSR16, 40 CFR §60.482-9(a); and 45CSR13, R13-2468, 9.2.5]

8.3. Recordkeeping Requirements

The permittee shall comply with the recordkeeping and reporting requirements of §§ 60.486 and 60.487; except as provided in the exceptions of 60.633, the recordkeeping requirements of § 60.635 and the reporting requirements of § 60.636.

The permittee shall comply with the recordkeeping requirements of § 60.635 in addition to the requirements of § 60.486. The following recordkeeping requirements shall apply to pressure relief devices subject to the requirements of § 60.633(b)(1).
[45CSR16, 40 C.F.R § 60.635(b)]

- 8.3.1. The permittee shall comply with the following required with respect to the LDAR requirements of Sections 8.1.1 and 8.1.3:

- a. The following recordkeeping requirements shall apply to pressure relief devices subject to the requirements of §60.633(b)(1) of 40 CFR 60 Subpart KKK.

1. When each leak is detected as specified in § 60.633(b)(2), a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification on the pressure relief device may be removed after it has been repaired.
[45CSR16, 40 C.F.R. § 60.635(b)(1) and 45CSR13, R13-2468, 9.3.1.a]
2. When each leak is detected as specified in § 60.633(b)(2), the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:
 - i. The instrument and operator identification numbers and the equipment identification number,
 - ii. The date the leak was detected and the dates of each attempt to repair the leak,
 - iii. Repair methods applied in each attempt to repair the leak,
 - iv. “Above 10,000 ppm” if the maximum instrument reading measured is 10,000 ppm or greater,
 - v. The “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak,
 - vi. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown,
 - vii. The expected date of successful repair of the leak if a leak is not repaired within 15 days,
 - viii. Dates of process unit shutdowns that occur while the equipment is unrepaired,
 - ix. The date of successful repair of the leak, and
 - x. A list of identification numbers for equipment that are designated for no detectable emissions which shall be signed by the owner/operator.
[45CSR16, 40 C.F.R. § 60.635(b)(2) and 45CSR13, R13-2468, 9.3.1.b]
3. The permittee shall comply with the following requirement in addition to the requirement of §60.486(j): Information and data used to demonstrate that a reciprocating compressor is in wet gas service to apply for the exemption in § 60.633(f) shall be recorded in a log that is kept in a readily accessible location.
[45CSR16, 40 C.F.R. § 60.635(c)]
- b. When each leak is detected as specified in §§60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following requirements apply:
 1. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
 2. The identification on a valve may be removed after it has been monitored for 2 successive months as specified in §60.482-7(c) and no leak has been detected during those 2 months.
 3. The identification on equipment except on a valve, may be removed after it has been repaired.
[45CSR16, 40 C.F.R. § 60.486(b) and 45CSR13, R13-2468, 9.3.1.a]

- c. When each leak is detected as specified in §§60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:
 1. The instrument and operator identification numbers and the equipment identification number.
 2. The date the leak was detected and the dates of each attempt to repair the leak.
 3. Repair methods applied in each attempt to repair the leak.
 4. “Above 10,000” if the maximum instrument reading measured by the methods specified in §60.485(a) after each repair attempt is equal to or greater than 10,000 ppm.
 5. “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
 6. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
 7. The expected date of successful repair of the leak if a leak is not repaired within 15 days.
 8. Dates of process unit shutdowns that occur while the equipment is unrepaired.
 9. The date of successful repair of the leak.

[45CSR16, 40 C.F.R. § 60.486(c) and 45CSR13, R13-2468, 9.3.1.b]

- d. The following information pertaining to all equipment subject to the requirements in §§60.482-1 to 60.482-10 shall be recorded in a log that is kept in a readily accessible location:
 1. A list of identification numbers for equipment subject to the requirements of this subpart.
 2. (i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §§60.482-2(e), 60.482-3(i) and 60.482-7(f).

(ii) The designation of equipment as subject to the requirements of §60.482-2(e), §60.482-3(i), or §60.482-7(f) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement.
 3. A list of equipment identification numbers for pressure relief devices required to comply with §60.482-4.
 4. (i) The dates of each compliance test as required in §§60.482-2(e), 60.482-3(i), 60.482-4, and 60.482-7(f).

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.
 5. A list of identification numbers for equipment in vacuum service.
 6. A list of identification numbers for equipment that the owner or operator designates as operating in VOC service less than 300 hr/yr in accordance with §60.482-1(e), a description of the conditions

under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr.

[45CSR16, 40 C.F.R. § 60.486(e) and 45CSR13, R13-2468, 9.3.2]

e. The following information pertaining to all valves subject to the requirements of §60.482-7(g) all pumps subject to the requirements of §60.482-2(g) shall be recorded in a log that is kept in a readily accessible location:

1. A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.
2. A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.

[45CSR16, 40 C.F.R. § 60.486(f) and 45CSR13, R13-2468, 9.3.3]

f. The following information shall be recorded for valves complying with §60.483-2:

1. A schedule of monitoring.
2. The percent of valves found leaking during each monitoring period.

[45CSR16, 40 C.F.R. § 60.486(g)]

g. The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in §60.480(d):

1. An analysis demonstrating the design capacity of the affected facility;
2. A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol; and
3. An analysis demonstrating that equipment is not in VOC service.

[45CSR16, 40 C.F.R. § 60.486(i)]

h. Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

[45CSR16, 40 C.F.R. § 60.486(j)]

8.4. Reporting Requirements

8.4.1. The permittee shall submit semiannual reports to the Director with regards to compliance with LDAR requirements of Conditions in Section 8.1. The reporting period for these reports shall be January 1st through June 30th and July 1st through December 31st. Such reports shall be post marked no later than July 30th and January 30th respectively. These reports shall contain the following information for each month of the semiannual reporting period, summarized from the information in 40 CFR §60.486 and 40 CFR §60.636(c)(1) – (c)(2):

- a. Number of valves for which leaks were detected as described in §60.482-7(b) or §60.483-2,
- b. Number of valves for which leaks were not repaired as required in §60.482-7(d)(1),

- c. Number of pumps for which leaks were detected as described in §§60.482-2(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii),
- d. Number of pumps for which leaks were not repaired as required in §§60.482-2(c)(1) and (d)(6),
- e. Number of compressors for which leaks were detected as described in §60.482-3(f),
- f. Number of compressors for which leaks were not repaired as required in §60.482-3(g)(1),
- g. Number of pressure relief valves for which leaks were detected as required in §60.633(b)(2), and
- h. Number of pressure relief devices for which leaks were not repaired as required in §60.633(b)(3).
- i. The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.
- j. Dates of process unit shutdowns which occurred within the semiannual reporting period.
- k. Revisions to items reported according to 40 CFR 60.487(b) if changes have occurred since the initial report or subsequent revisions to the initial report.

[40 C.F.R. §60.636(c), 40 C.F.R. §60.487(c), and 40 C.F.R. §60.19(d); 45CSR16 and 45CSR13, R13-2468, 9.4.1]

9.0. Source-Specific Requirements • Galmish Diesel Fired Firewater Pumps [EN01, EN02 and EN03] and Fire Water Heaters [FW-2 and FW-4]

9.1. Limitations and Standards

9.1.1. Emissions from the 300 hp diesel fired fire pumps shall not exceed the following:

ID No.	Description	NOx		CO		VOC		PM		SO ₂	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
001-01	Fire Pump	3.44	15.06	0.67	2.93	0.21	0.90	0.15	0.67	0.57	2.49
001-02	Fire Pump	3.44	15.06	0.67	2.93	0.21	0.90	0.15	0.67	0.57	2.49

[45CSR13, R13-2468, 4.1.1] [EN01, EN02]

9.1.2. The amount of diesel fuel combusted in each of the firewater pump sets 001-01 and 001-02 shall not exceed 14 gallons per hour and 122,640 gallons per year.

[45CSR13, R13-2468, 4.1.5(a)] [EN01, EN02]

9.1.3. Emissions from the 211 hp diesel fired fire pump identified as 001-03 shall not exceed the following:

ID No.	Description	NOx		CO		VOC		PM		SO ₂	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
001-03	Fire Pump	1.21	5.30	0.28	1.22	0.05	0.20	0.04	0.16	0.44	1.91

[45CSR13, R13-2468, 4.1.2] [EN03]

9.1.4. The amount of diesel fuel combusted in firewater pump set 001-03 shall not exceed 10.7 gallons per hour and 93,732 gallons per year.

[45CSR13, R13-2468, 4.1.5(b)] [EN03]

9.1.5. Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to the Subpart IIII of Part 60 and shown below for all pollutants.

Table 4 to Subpart IIII of Part 60 - Emission Standards for Stationary Fire Pump Engines

Maximum engine power	Model year	NMHC + NOx	CO	PM
		g/bhp-hr	g/bhp-hr	g/bhp-hr
300 ≤ HP < 600 (001-01 and 001-02)	2008 and earlier	7.8	2.6	0.40
175 ≤ HP < 300 (001-03)	2009+	3.0	-	0.15

Compliance with NOx, CO and PM emission limits in Requirements 9.1.1. and 9.1.3 will demonstrate compliance with these Standards.

[45CSR16, 40 C.F.R. §60.4205(c)] [EN01, EN02, EN03]

- 9.1.6. Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.
[45CSR16, 40 C.F.R. §60.4206] [EN01, EN02, EN03]
- 9.1.7. Diesel fuel used by the engines for firewater pumps shall have a maximum sulfur content no greater than 15 ppm (ultra-low sulfur diesel - USLD) and with either a minimum centane index of 40 or a maximum aromatic content of 35 volume percent. Diesel meeting the specifications of Nonroad diesel under 40 C.F.R. §80.510(b) is equivalent.
[45CSR16, 40 C.F.R. §60.4207(b) and 45CSR13, R13-2468, 4.1.4] [EN01, EN02, EN03]
- 9.1.8. The following conditions and requirements are specific to firewater pump sets identified as 001-01, 001-02, and 001-03:
- a. The engine shall be used as an emergency stationary engine and be limited to non-emergency operation of no more than 100 hours per year per pump set. Non-emergency operation shall be for maintenance checks and readiness testing.
[40 C.F.R. §60.4211(f)]
 - b. Each firewater pump set shall be equipped with an engine or engine configuration that has been certified by the manufacturer to comply with either 40 C.F.R. §60.4202(d), or 40 C.F.R. §60.4205(c), which can refer to requirements of 40 C.F.R. Part 89, 40 C.F.R. Part 94, or 40 C.F.R. Part 60.
[40 C.F.R. §§60.4211(a)(3) and (c)]
 - c. The permittee shall maintain each engine of each firewater pump set according to the manufacturer's emission-related written instructions.
[40 C.F.R. §60.4211(a)(1)]
 - d. The permittee shall only change those emission-related settings of the engine that are permitted by the manufacturer.
[40 C.F.R. §60.4211(a)(2)]
 - e. Owners or operators of an emergency stationary CI internal combustion engine, the facility must install a non-resettable hour meter prior to startup of the engine.
[40 C.F.R. §60.4209(a)]
- [45CSR16 and 45CSR13, R13-2468, 4.1.3] [EN01, EN02, EN03]**
- 9.1.9. Owners or operators of a 2007 model year and later stationary CI internal combustion engine that must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies, the fire pump engine power rating in table 3 to this subpart and that must comply with the emission standards specified in §60.4205(c) (Requirement 9.1.5), must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.
[45CSR16, 40 C.F.R. §60.4211(c)] [EN01, EN02, EN03]
- 9.1.10. Pursuant to 40 CFR 63 Subpart ZZZZ *National Emission Standards for Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines*, the facility is subject to the following provision given below:

Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets the criteria in paragraph (c)(1) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under this part.

- (1) a new or reconstructed stationary RICE located at an area source;

[45CSR34, 40 C.F.R. 63 Subpart ZZZZ §63.6590(c)][EN01, EN02, EN03]

- 9.1.11. The fire water heaters identified as T-FW-2 and T-FW-4 shall be limited to being fired with propane. Compliance with this fuel restriction shall satisfy compliance with the visible emission limit of 45 CSR §2-3.1. **[45CSR13, R13-2468, 4.1.6] [FW-2, FW-4]**

9.2. Monitoring Requirements

- 9.2.1. For the purpose of demonstrating compliance with the hours of operation limit in Condition 9.1.8, the permittee shall record the number of hours each firewater pump set operated for non-emergency situations during the month and the reason for such operation. Such records shall be maintained in accordance with Condition 3.4.2. **[40 CFR §60.4211(f), 45CSR16 and 45CSR13, R13-2468, 4.2.1] [EN01, EN02, EN03]**

9.3. Testing Requirements

- 9.3.1. None

9.4. Recordkeeping Requirements

- 9.4.1. For the purpose of determining compliance with the maximum fuel use limits, emission limits, and type of fuel set forth in Sections 9.1.2 and 9.1.4, the applicant shall maintain a monthly record of the quantity of #2 diesel fuel burned and the number of hours of operation for each fire pump. In addition, the facility shall maintain records of #2 diesel fuel delivered to the facility that meets the specification as stated in Condition 9.1.7. Records shall be maintained in accordance with Condition 3.4.2. **[45CSR13, R13-2468, 4.4.2] [EN01, EN02, EN03]**
- 9.4.2. If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner 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) and 45CSR16][EN01, EN02, EN03]**

9.5. Reporting Requirements

- 9.5.1. None.

9.6. Compliance Plan

9.6.1. None.

10.0. Source-Specific Requirements • Railcar Loading Operations at Galmish Loading Area

10.1. Limitations and Standards

- 10.1.1. The permittee shall operate and maintain the vapor recovery system (VRU-1) in accordance with the following emission limitations and operating parameters.
- a. The vapor recovery system shall capture displaced vapors from each railcar being loaded, excluding railcars being loaded using the vapor balancing system, and non-condensable vapors shall be routed to the suction side of the compressor(s) located at the Hastings Compressor Station (Facility ID: 103-00006). The process piping and pieces of equipment (i.e., compressor, separators, gas coolers, etc.) used in the vapor recovery system shall meet the closed vent system requirements of this condition, unless otherwise specified in Section 10.0.
[Order for Compliance No. 4 of CO-R13-E-2015-13]
 - b. The vapor recovery system shall be operated at least 95% of the time on a 12-month rolling basis when liquefied hydrocarbon products are loaded into railcars at the facility. Compliance with this limitation is based on the monthly hours that the vapor recovery system operated in normal operation mode during the loading of liquefied hydrocarbon products into railcars divided by the monthly total hours that liquefied hydrocarbon products are loading into railcars on a 12-month rolling basis. This limitation does not apply to the loading of propane when using the vapor balancing system.
 - c. The closed vent system as required in this condition shall meet the following:
 - i. The system shall be constructed of hard piping.
 - ii. The system shall be constructed and maintained free of leaks. A leaking component is defined as a measured instrument reading 500 ppm and greater above background when using U.S. EPA Method 21 or by visual inspection.
 - iii. All detected leaks of the closed vent system shall be repaired within 15 days of detection with the first attempt of making the repair no later than five (5) days after detection.
[CO-R13-E-2015-13]
 - iv. All repaired leaks shall be verified to be using the same method that discovery of the leak was detected.
[CO-R13-E-2015-13]
 - d. Normal operation of the vapor recovery system (VRU-1) shall mean that the system is operating in a manner to capture the vapors displaced from railcar tankers being loaded and route the collected vapors back to a process unit with no detectable emissions in accordance with the daily inspection requirement in Condition 10.2.2.
 - e. The rod packing associated with the compressor for VRU-1 shall be replaced on the interval recommended by the manufacturer or maintained in a leak free condition.
 - f. The permittee shall install and maintain a system to monitor the seal system for the recovered liquid pumps (P-3660 & P-3665) that indicates failure of the seal system. The system shall be equipped with either an audible or visual alarm when failure has been detected. When seal failure has been detected, the permittee shall immediately take the corresponding pump out of service and the pump shall remain out of service until the pump seal has been repaired.

- g. Each by-pass valve device on the closed vent system, which excludes pressure relief devices, shall meet the following requirements.
 - i. A flow indicator for each by-pass device shall be properly installed, calibrated, maintained, and operated at each bypass device. **[Order for Compliance No. 2 of CO-R13, 30-E-2018-08]**
 - ii. Each flow or “open valve” indicator must be capable of soundings an “valve open” alarm that initiates notification via remote signal to the nearest field office. A by-passed device in the “open position” means that stream is being, could be, diverted from the closed vent system to the atmosphere. **[Order for Compliance No. 2 of CO-R13, R30-E-2018-08]**
 - iii. Manually operated by-pass device valves located on the closed vent system that could divert the stream to atmosphere are excluded from the requirements above in subitems i. and ii. of this sub condition. The permittee shall secure each of these manually operated by-pass valve devices in the non-diverting position with a car-seal, plugged, and bolted flange, or a lock-and-key type configuration. **[Order for Compliance No. 2 of CO-R13, R30-E-2018-08]**
- h. The vent lines from the oxygen analyzer and dry running secondary seal system of Pumps P-3660 and P-3665 are permitted to be routed to atmosphere through emission point VS-1 in accordance with the following:
 - i. The VOC emissions released from the oxygen analyzer shall not exceed 18.0 tons per year. Compliance with this limitation shall be satisfied by regulating the continuous bleed rate to the analyzer of no greater than 0.5 cubic feet per minute.
 - ii. The fluid from the secondary seal system for Pumps P-3660 and P-3665 shall be permitted to vent at all times except when a primary or secondary seal failure is detected.

[45CSR13, R13-2468, 7.1.1]

- 10.1.2. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment at Galmish 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§13-5.10 and 45CSR13, R13-2468, 7.1.2]

10.2. Monitoring Requirements

- 10.2.1. The permittee shall conduct monthly audio visual olfactory (AVO) monitoring of the closed vent system in Condition 10.1.1.c. Such inspection shall be conducted when loading non-vapor balance railcar tankers using VRU-1. Any identified leak or defective component shall be repaired in accordance with the timing requirements of Condition 10.1.1.c.iii. and verified that the repair is completed in accordance with Condition 10.1.1.c.iv. Records of such inspections and repairs shall be maintained in accordance with Condition 3.4.2. and include the following:
- a. Date of inspection;
 - b. Name of inspector(s);
 - c. Operational Status of the VRU-1;
 - d. Name and identification of Leaking/Defective Component(s);
 - e. Method of Detection;

- f. Date of 1st repair attempt of leaking/defective component;
- g. Date of final repair of leaking/defective component;
- h. Date the repair was verified; and
- i. Method used to verify the repair.

[Order for Compliance No. 5 of CO-R13-E-2015-13 and 45CSR13, R13-2468, 7.2.1]

- 10.2.2. The permittee shall perform daily inspections of the VRU closed vent system during periods when the railcar loadout is operating to confirm the closed vent system is not venting to the vent stack. The closed vent system inspections shall include at a minimum evaluation of the operating status of one or more bypass devices that could be used to divert all or a portion of the VRU gases, vapors, or fumes to the atmosphere. Records of these daily inspections shall be maintained in accordance with Condition 3.4.2.

[Order for Compliance No. 4 of CO-R13, 30-E-2018-08 and 45CSR13, R13-2468, 7.2.2]

- 10.2.3. The permittee shall record all instances that the flow indicator of any bypass device initiated an “valve open” alarm. These records shall be maintained in accordance with Condition 3.4.2. and include the following:
- a. Date and time the alarm initiated;
 - b. Total time the bypass device was open;
 - c. Reason for the bypass device to open;
 - d. The status of VRU-1; and
 - e. VOC emissions released during the bypass event.

[Order for Compliance No. 3 of CO-R13, 30-E-2018-08 and 45CSR13, R13-2468, 7.2.3]

- 10.2.4. The permittee shall measure the bleed rate to the oxygen analyzer at least once per calendar year or when the instrument is calibrated. Records of such monitoring shall be maintained in accordance with Condition 3.4.2. **[45CSR13, R13-2468, 7.2.4]**

10.3. Testing Requirements

- 10.3.1. None

10.4. Recordkeeping Requirements

- 10.4.1. The permittee shall keep a log of the opening of all manually operated bypass valve devices. Such entry shall include the identification of the valve opened; date and time of the opening, reason for the opening; if products were being loaded into railcar tankers, the total amount of VOCs released; and the date and time the valve was closed. Such records shall be maintained in accordance with Condition 3.4.2. **[45CSR13, R13-2468, 7.3.1]**
- 10.4.2. In accordance with Condition 10.1.1.b. no later than 15 days after the end of each month, the permittee shall total the number of hours that products were loaded out using the VRU-1 in a non-diverting mode and the number of hours that products were loaded out not include any time that propane was only being loaded using a vapor balance system and determine the percentage that the VRU-1 in a non-diverting mode was used over

the previous 12-months. Such records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-2468, 7.3.2]

10.5. Reporting Requirements

10.5.1. None.

10.6. Compliance Plan

10.6.1. None.

11.0. Requirements for the Knock-out Tank at the Hastings Electric Compressor Station (HECS)

11.1. Limitations and Standards

- 11.1.1. The continuously venting of VOC emissions from Knock-out Tank V-2195 shall not exceed 0.02 lb per hour, except during start-up and shut-down of Compressors C-200 and C-300. Compliance with this limit shall be demonstrated by complying with the following limitations:
- a. The barrier fluid used in the seal systems for Compressors C-200 and C-300 shall be residue gas or fluid that has a VOC content of no greater than 0.05 percent by weight.
 - b. The seal systems for Compressors C-200 and C-300 shall not vent residue gas to Knock-out Tank V-2195 at a rate greater than six standard cubic feet per minute from each compressor.
 - c. To minimize emissions from V-2195, the permittee shall minimize the venting (blowdowns) of Compressors C-200 and C-300 during startup and shutdown to limit the venting to gases and or vapors of 23,075 standard cubic feet of inlet gas (wet gas) from C-200 and 16,000 standard cubic feet of residue gas from C-300 due to each startup event; 92,300 standard cubic feet of wet gas from C-200 and 64,000 standard cubic feet of residue gas from C-300 due to each shutdown event.

[45CSR13, R13-2468, 8.1.1]

11.2. Monitoring Requirements

- 11.2.1. The permittee shall monitor and record each time that Compressors C-200 and C-300 are depressurized. The permittee shall record the date, purpose of the depressurization (i.e., startup or shutdown), and determine the amount of VOC emissions released through V-2195 due to the depressurizing event. Records of this monitoring shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-2468, 8.2.1]
- 11.2.2. The permittee shall monitor the hours that Compressors C-200 and C-300 operated and hours the seal system for the corresponding compressor operated properly. Records of this monitoring shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-2468, 8.2.2]

11.3. Testing Requirements

- 11.3.1. None

11.4. Recordkeeping Requirements

- 11.4.1. The permittee shall keep records of all maintenance activities to include any changes to the flowrate of the barrier fluid(s) for the seal systems used for minimizing the leakage from the compressor seals for C-200 and C-300. Such records shall be maintained in accordance with Condition 3.4.2.
[45CSR13, R13-2468, 8.3.1]

11.5. Reporting Requirements

11.5.1. None.

11.6. Compliance Plan

11.6.1. None.