

*West Virginia Department of Environmental Protection*  
*Earl Ray Tomblin*  
*Governor*

*Division of Air Quality*

*Randy C. Huffman*  
*Cabinet Secretary*

# Permit to Modify



**DRAFT R13- 3206**

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

*Issued to:*

**Williams Ohio Valley Midstream LLC**  
**Burch Ridge Compressor Station**  
**051-00150**

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*William F. Durham*  
*Director*

*Issued: DRAFT*

*This permitting action supersedes and replaces G35-A080.*

Facility Location: Proctor, Marshall County, West Virginia  
Mailing Address: Park Place Corporate Center 2, 2000 Commerce Drive, Pittsburgh, PA 15275  
Facility Description: Natural gas compressor station  
NAICS Codes: 213112  
UTM Coordinates: 517.3 km Easting • 4400.0 km Northing • Zone 17S  
Permit Type: Modification  
Description of Change: The modification includes the addition of an EG refrigeration system [DSV-03] and oil heater [HTR-01]; new microturbine generators [CT-01 thru CT-10]; new emergency generator engine [GE-01]; new VOC combustors [01-COMB, 02-COMB]; and removal of one Caterpillar G3516B compressor engine [CE-4].

*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.*

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*The source is not subject to 45CSR30.*

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## Table of Contents

<b>1.0.</b>	<b>Emission Units .....</b>	<b>6</b>
<b>1.1.</b>	<b>Control Devices.....</b>	<b>7</b>
<b>2.0.</b>	<b>General Conditions.....</b>	<b>8</b>
2.1.	Definitions .....	8
2.2.	Acronyms.....	8
2.3.	Authority.....	9
2.4.	Term and Renewal.....	9
2.5.	Duty to Comply .....	9
2.6.	Duty to Provide Information.....	9
2.7.	Duty to Supplement and Correct Information.....	10
2.8.	Administrative Update.....	10
2.9.	Permit Modification.....	10
2.10.	Major Permit Modification .....	10
2.11.	Inspection and Entry .....	10
2.12.	Emergency .....	10
2.13.	Need to Halt or Reduce Activity Not a Defense.....	11
2.14.	Suspension of Activities .....	11
2.15.	Property Rights .....	11
2.16.	Severability .....	12
2.17.	Transferability.....	12
2.18.	Notification Requirements.....	12
2.19.	Credible Evidence.....	12
<b>3.0.</b>	<b>Facility-Wide Requirements.....</b>	<b>13</b>
3.1.	Limitations and Standards .....	13
3.2.	Monitoring Requirements .....	13
3.3.	Testing Requirements .....	13
3.4.	Recordkeeping Requirements.....	14
3.5.	Reporting Requirements .....	15
<b>4.0.</b>	<b>Source-Specific Requirements.....</b>	<b>16</b>
4.1.	Limitations and Standards .....	16
<b>5.0.</b>	<b>Source-Specific Requirements (Engines, CE-01, CE-02, CE-03, GE-01).....</b>	<b>18</b>
5.1.	Limitations and Standards .....	18
5.2.	Monitoring Requirements .....	19
5.3.	Testing Requirements .....	19
5.4.	Recordkeeping Requirements.....	20
5.5.	Reporting Requirements .....	20
<b>6.0.</b>	<b>Source-Specific Requirements (40 CFR 60 Subpart JJJJ Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, CE-01, CE-02, CE-03).....</b>	<b>20</b>
6.1.	Limitations and Standards .....	20
6.2.	Emission Standards for Owners and Operators .....	21
6.3.	Other Requirements for Owners and Operators.....	22
6.4.	Compliance Requirements for Owners and Operators.....	22
6.5.	Testing Requirements for Owners and Operators.....	23
6.6.	Notification, Reports, and Records for Owners and Operators.....	25

<b>7.0. Source-Specific Requirements (40 CFR 63 Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, CE-01, CE-02, CE-03, GE-01).....</b>	<b>26</b>
7.1. Limitations and Standards .....	26
7.2. When do I have to comply with this subpart .....	26
7.3. Emission and Operating Limitations .....	26
7.4. What are my general requirements for complying with this subpart .....	27
7.5. How do I demonstrate continuous compliance with the emissions limitations and operating limitations .....	27
7.6. What records must I keep .....	29
<b>8.0. Source-Specific Requirements (40CFR60 Subpart OOOO Requirements, CE-01, CE-02, CE-03).....</b>	<b>30</b>
8.1. Limitations and Standards .....	30
8.2. Initial Compliance Demonstration .....	31
8.3. Continuous Compliance Demonstration .....	31
8.4. Notification, Recordkeeping and Reporting Requirements .....	32
<b>9.0. Source-Specific Requirements (Microturbines, CT-01 – CT-10).....</b>	<b>34</b>
9.1. Limitations and Standards .....	34
9.2. Recordkeeping Requirements .....	34
<b>10.0. Source-Specific Requirements (Heater, HTR-01) .....</b>	<b>34</b>
10.1. Limitations and Standards .....	34
10.2. Monitoring Requirements .....	35
10.3. Testing Requirements .....	35
10.4. Recordkeeping Requirements .....	35
10.5. Reporting Requirements .....	35
<b>11.0. Source-Specific Requirements (Produced Water/Condensate Tanks, TK-01, TK-02 Controlled by Vapor Combustor 01-COMB, 02-COMB) .....</b>	<b>36</b>
11.1. Limitations and Standards .....	36
11.2. Monitoring Requirements .....	36
11.3. Recordkeeping Requirements .....	36
<b>12.0. Source-Specific Requirements (Tank Truck Loading, TLO).....</b>	<b>37</b>
12.1. Limitations and Standards .....	37
12.2. Recordkeeping Requirements .....	37
<b>13.0. Source-Specific Requirements (Dehydration Units and Refrigeration System: DFT-01, -02; RBV-01, -02; DSV-01, -02, -03; 01-, 02-BTEX) .....</b>	<b>37</b>
13.1. Limitations and Standards .....	37
13.2. Monitoring Requirements .....	38
13.3. Testing Requirements .....	39
13.4. Recordkeeping Requirements .....	40
13.5. Reporting Requirements .....	41
<b>14.0. Source-Specific Requirements (Dehydration Units with Exemption from NESHAP Standard, Subpart HH §63.764(d)) (DSV-1 and DSV-2) .....</b>	<b>41</b>
14.1. Limitations and Standards .....	41
14.2. Testing Requirements .....	44
14.3. Recordkeeping Requirements .....	44
14.4. Reporting Requirements .....	45

<b>15.0. Source-Specific Requirements (Vapor Combustors, 01-COMB, 02-COMB) .....</b>	<b>45</b>
15.1. Limitations and Standards .....	45
15.2. Monitoring Requirements .....	46
15.3. Testing Requirements .....	46
15.4. Recordkeeping Requirements .....	47
15.5. Reporting Requirements .....	48
<b>16.0. Source-Specific Requirements (40 CFR 60 Subpart OOOO Requirements, Equipment Leak Standards, Refrigeration Plant) .....</b>	<b>48</b>
16.1. Limitations and Standards .....	48
16.2. Initial Compliance Demonstration .....	50
16.3. Continuous Compliance Demonstration .....	51
16.4. Reporting and Recordkeeping .....	51
<b>CERTIFICATION OF DATA ACCURACY.....</b>	<b>54</b>

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**1.0. Emission Units**

<b>Emission Unit ID</b>	<b>Emission Point ID</b>	<b>Emission Unit Description</b>	<b>Year Installed</b>	<b>Design Capacity</b>	<b>Control Device</b>
CE-01	1E	Caterpillar G3516B Engine	2013	1,380 bhp	01-OxCat
CE-02	2E	Caterpillar G3516B Engine	2013	1,380 bhp	02-OxCat
CE-03	3E	Caterpillar G3516B Engine	TBD	1,380 bhp	03-OxCat
GE-01	4E	Cummins 4BT3.9-G.3 emergency generator engine (Date of Mfg. 1/7/2000)	TBD	86 bhp	None
RPC	5E	Rod Packing/ Crankcase Leaks	2013	n/a	None
SSM	6E	Startup/ Shutdown/ Maintenance Blowdowns (BD)	2013	n/a	None
DFT-01	7E	Exterran TEG Dehydrator Flash Tank	2013	40 MMscfd	01-COMB/ 02-COMB
DSV-01	8E	Exterran TEG Dehydrator Still Vent	2013	40 MMscfd	01-BTEX*
RBV-01	9E	TEG Dehydrator Reboiler	2013	1.11 MMBtu/hr	None
DFT-02	10E	Exterran TEG Dehydrator Flash Tank	2013	40 MMscfd	01-COMB/ 02-COMB
DSV-02	11E	Exterran TEG Dehydrator Still Vent	2013	40 MMscfd	02-BTEX*
RBV-02	12E	TEG Dehydrator Reboiler	2013	1.11 MMBtu/hr	None
DSV-03	13E	EG Regenerator/Still Vent (Refrigeration Plant)	TBD	60 MMscfd	None
HTR-01	14E	Oil Heater (Refrigeration Plant)	TBD	9.70 MMBtu/hr	None
CT-01	15E	Capstone C200 Microturbine	TBD	200 ekW	None
CT-02	16E	Capstone C200 Microturbine	TBD	200 ekW	None
CT-03	17E	Capstone C200 Microturbine	TBD	200 ekW	None
CT-04	18E	Capstone C200 Microturbine	TBD	200 ekW	None
CT-05	19E	Capstone C200 Microturbine	TBD	200 ekW	None
CT-06	20E	Capstone C200 Microturbine	TBD	200 ekW	None
CT-07	21E	Capstone C200 Microturbine	TBD	200 ekW	None
CT-08	22E	Capstone C200 Microturbine	TBD	200 ekW	None
CT-09	23E	Capstone C200 Microturbine	TBD	200 ekW	None
CT-10	24E	Capstone C200 Microturbine	TBD	200 ekW	None
TK-01	25E	Produced Water/Condensate Tank	2013	210 bbl	01-COMB/ 02-COMB
TK-02	26E	Produced Water/Condensate Tank	2013	210 bbl	01-COMB/ 02-COMB

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
TLO	27E	Truck Loadout	2013	21,900 bbl/yr	None
COMB-1	28E	Messco 42" VOC Combustor	2015	42 MSCFD 4.50 MMBtu/hr	N/A
COMB-2	29E	Messco 42" VOC Combustor	2015	42 MSCFD 4.50 MMBtu/hr	N/A
FUG-G	30E	Piping and Equipment Fugitives - Gas	2013	N/A	None
FUG-L	31E	Piping and Equipment Fugitives – Liquid	2013	N/A	None
TK-03	32E	Water and Oil Storage Tank	TBD	4,200 gal	None
TK-04	33E	Lube Oil Storage Tank	2013	500 gal	None
TK-05	34E	Used Oil Storage Tank	2013	300 gal	None
TK-06	35E	Methanol Storage Tank	2013	220 gal	None
TK-07	36E	Lube Oil Storage Tank	2013	500 gal	None
TK-08	37E	Used Oil Storage Tank	2013	300 gal	None
TK-09	38E	Methanol Storage Tank	2013	220 gal	None
TK-10	39E	Lube Oil Storage Tank	2013	500 gal	None
TK-11	40E	Used Oil Storage Tank	2013	300 gal	None
TK-12	41E	Methanol Storage Tank	2013	220 gal	None
TK-13	42E	Lube Oil Storage Tank	2013	500 gal	None
TK-14	43E	Used Oil Storage Tank	2013	300 gal	None
TK-15	44E	Methanol Storage Tank	2013	220 gal	None
TK-16	45E	Diesel Storage Tank	TBD	250 gal	None
* The 01- and 02- BTEX Skids vent thru the "Flame Zone" of the Reboilers [RBV-01 and -02]					

**1.1. Control Devices**

Emission Unit	Pollutant	Control Device	Control Efficiency
CE-01 CE-02 CE-03 Caterpillar G3516B Engines	Carbon Monoxide (CO)	01-OxCat	≥93%
	Volatile Organic Compounds (VOC)	02-OxCat 03-OxCat	≥35%
	Formaldehyde (HCHO)	EMIT Technologies; Model ELS-3050Z-1416F-30CEO-241	≥76%
DSV-1 DSV-2 Dehydrator Still Vents	Volatile Organic Compounds (VOC)	01-BTEX 02-BTEX	95%
	Hazardous Air Pollutants (HAP)		
DFT-01 DFT-02 Dehydrator Flash Tanks	Volatile Organic Compounds (VOC)	01-COMB 02-COMB	98%
	Hazardous Air Pollutants (HAP)		

## 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.

### 2.2. Acronyms

<b>CAAA</b>	Clean Air Act Amendments	<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>CBI</b>	Confidential Business Information	<b>NSPS</b>	New Source Performance Standards
<b>CEM</b>	Continuous Emission Monitor	<b>PM</b>	Particulate Matter
<b>CES</b>	Certified Emission Statement	<b>PM<sub>2.5</sub></b>	Particulate Matter less than 2.5 µm in diameter
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>CO</b>	Carbon Monoxide	<b>Ppb</b>	Pounds per Batch
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>Pph</b>	Pounds per Hour
<b>DAQ</b>	Division of Air Quality	<b>Ppm</b>	Parts per Million
<b>DEP</b>	Department of Environmental Protection	<b>Ppm<sub>v</sub> or ppmv</b>	Parts per Million by Volume
<b>dscm</b>	Dry Standard Cubic Meter	<b>PSD</b>	Prevention of Significant Deterioration
<b>FOIA</b>	Freedom of Information Act	<b>Psi</b>	Pounds per Square Inch
<b>HAP</b>	Hazardous Air Pollutant	<b>SIC</b>	Standard Industrial Classification
<b>HON</b>	Hazardous Organic NESHAP	<b>SIP</b>	State Implementation Plan
<b>HP</b>	Horsepower	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>lbs/hr</b>	Pounds per Hour	<b>TAP</b>	Toxic Air Pollutant
<b>LDAR</b>	Leak Detection and Repair	<b>TPY</b>	Tons per Year
<b>M</b>	Thousand	<b>TRS</b>	Total Reduced Sulfur
<b>MACT</b>	Maximum Achievable Control Technology	<b>TSP</b>	Total Suspended Particulate
<b>MDHI</b>	Maximum Design Heat Input	<b>USEPA</b>	United States Environmental Protection Agency
<b>MM</b>	Million	<b>UTM</b>	Universal Transverse Mercator
<b>MMBtu/hr or mmbtu/hr</b>	Million British Thermal Units per Hour	<b>VEE</b>	Visual Emissions Evaluation
<b>MMCF/hr or mmcf/hr</b>	Million Cubic Feet per Hour	<b>VOC</b>	Volatile Organic Compounds
<b>NA</b>	Not Applicable	<b>VOL</b>	Volatile Organic Liquids
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		

### **2.3. Authority**

This permit is issued in accordance with West Virginia air pollution control law W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

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

### **2.4. Term and Renewal**

- 2.4.1. This permit supersedes and replaces previously issued General Permit Registration G35-A080. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

### **2.5. Duty to Comply**

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-3206 and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;  
**[45CSR§§13-5.11 and -10.3.]**
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

### **2.6. Duty to Provide Information**

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

**2.7. Duty to Supplement and Correct Information**

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

**2.8. Administrative Update**

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4.]

**2.9. Permit Modification**

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

**2.10 Major Permit Modification**

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

**2.11. Inspection and Entry**

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.

**2.12. Emergency**

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable 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.

- 2.12.2. 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 Section 2.12.3 are met.
- 2.12.3. 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. 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 must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

### **2.13. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it should 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.

### **2.14. Suspension of Activities**

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

### **2.15. Property Rights**

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

**2.16. Severability**

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

**2.17. Transferability**

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1.]

**2.18. Notification Requirements**

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

**2.19. Credible Evidence**

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 defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

### 3.0. Facility-Wide Requirements

#### 3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency 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, suffer, allow or permit 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.  
[40CFR§61.145(b) and 45CSR§34]
- 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. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.  
[45CSR§13-10.5.]
- 3.1.6. **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.]

#### 3.2. Monitoring Requirements

*[Reserved]*

#### 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 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as 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. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- d. The permittee shall submit a report of the results of the stack test within sixty (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; and,
  3. A statement of compliance or noncompliance with each permit or rule condition.

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

### 3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **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§4. State Enforceable Only.]**

### 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.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** 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 with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

**If to the DAQ:**

Director  
WVDEP  
Division of Air Quality  
601 57<sup>th</sup> Street  
Charleston, WV 25304-2345

**If to the US EPA:**

Associate Director  
Office of Air Enforcement and Compliance  
Assistance  
(3AP20)  
U.S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

#### 3.5.4. Operating Fee

- 3.5.4.1. In accordance with 45CSR22 – Air Quality Management Fee Program, the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first obtaining and having in current effect a Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually, shall be maintained on the premises for which the certificate has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.
- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

## 4.0. Source-Specific Requirements

### 4.1. Limitations and Standards

- 4.1.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:
- The date, place as defined in this permit, and time of sampling or measurements;
  - The date(s) analyses were performed;
  - The company or entity that performed the analyses;
  - The analytical techniques or methods used;
  - The results of the analyses; and
  - The operating conditions existing at the time of sampling or measurement.
- 4.1.2. **Minor Source of Hazardous Air Pollutants (HAP).** HAP emissions from the facility shall be less than 10 tons/year of any single HAP or 25 tons/year of any combination of HAPs. Compliance with this Section shall ensure that the facility is a minor HAP source.
- 4.1.3. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.  
**[45CSR§13-5.11.]**
- 4.1.4. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment 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:
- The equipment involved.
  - Steps taken to minimize emissions during the event.
  - The duration of the event.
  - The estimated increase in emissions during the event.
- For each such case associated with an equipment malfunction, the additional information shall also be recorded:
- The cause of the malfunction.
  - Steps taken to correct the malfunction.
  - Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.1.5. **Minor Source.** The permittee shall maintain records of annual HAP and all other regulated air pollutant emissions (NOX, CO, VOC, SO<sub>2</sub>, PM<sub>10/2.5</sub>) using AP-42 emission factors, GRI-GLYCalc model outputs, manufacturer guaranteed values, sample and/or test data, or other methods approved by DAQ demonstrating that facility-wide emissions are less than major source thresholds.

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## 5.0. Source-Specific Requirements (Engines, CE-01, CE-02, CE-03, GE-01)

### 5.1. Limitations and Standards

- 5.1.1. The reciprocating internal combustion ignition engines listed in the Emissions Unit Table in Section 1.0 of this permit shall be operated and maintained in accordance with the manufacturer’s recommendations and specifications or in accordance with a site specific maintenance plan; and in a manner consistent with good operating practices.
- 5.1.2. The quantity of natural gas that shall be consumed in each 1,380 hp natural gas fired reciprocating engine equipped with an oxidation catalyst (01-OxCat, 02-OxCat, 03-OxCat), Caterpillar G3516B (CE-01, CE-02, CE-03), shall not exceed 11,123 cubic feet per hour or  $97.43 \times 10^6$  cubic feet per year. . The maximum yearly fuel consumption limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the natural gas fuel consumption at any given time during the previous twelve consecutive calendar months.
- 5.1.3. Maximum emissions from each 1,380 hp natural gas fired reciprocating engine equipped with an oxidation catalyst (01-OxCat, 02-OxCat, 03-OxCat), Caterpillar G3516B (CE-01, CE-02, CE-03), shall not exceed the following limits:

Table 5.1.2. Emissions Limits for Caterpillar G3516B Engine (CE-01, CE-02, CE-03)

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	1.52	6.66
Carbon Monoxide	0.64	2.82
Volatile Organic Compounds	2.14	9.36
Formaldehyde	0.28	1.22

- 5.1.4. The quantity of diesel fuel that shall be consumed in the 86 hp Cummins 4BT3.9-G3 emergency generator engine (GE-01) shall not exceed 4.4 gal/hr or 2,197 gal/year. The maximum yearly fuel consumption limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the natural gas fuel consumption at any given time during the previous twelve consecutive calendar months.
- 5.1.5. The non-emergency operating hours of the 86 hp Cummins 4BT3.9-G3 emergency generator engine shall not exceed 500 hours per year. Compliance shall be demonstrated on a 12-month rolling total basis. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.
- 5.1.6. Maximum emissions from the 86 hp diesel fueled emergency generator engine shall not exceed the following limits:

Table 5.1.4. Emissions Limits for Cummins 4BT3.9-G3 Emergency Generator Engine (GE-01)

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	2.67	0.67
Carbon Monoxide	0.57	0.14
Volatile Organic Compounds	0.22	0.05

Formaldehyde	0.04	0.01
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#### 5.1.7. Requirements for Use of Catalytic Reduction Devices

- a. Natural gas compressor engines equipped with non-selective catalytic reduction (NSCR) air pollution control devices shall be fitted with a closed-loop, automatic air/fuel ratio controller to ensure emissions of regulated pollutants do not exceed the potential to emit for any engine/NSCR combination under varying load. The closed-loop, automatic air/fuel ratio controller shall control a fuel metering valve to deliver additional fuel when required to ensure a fuel-rich mixture and a resultant exhaust oxygen content of less than or equal to 0.5%. The automatic air/fuel ratio controller shall also incorporate dual-point exhaust gas temperature and oxygen sensors which provide temperature and exhaust oxygen content differential feedback. Such controls shall ensure proper and efficient operation of the engine and NSCR air pollution control device;
- b. The automatic air/fuel ratio controller or closed-loop automatic feedback controller shall provide a warning or indication to the operator and/or be interlocked with the engine ignition system to cease engine operation in case of a masking, poisoning or overrich air/fuel ratio situation which results in performance degradation or failure of the catalyst element; and
- c. The permittee shall follow a written operation and maintenance plan that provides the periodic and annual maintenance requirements.
- d. No person shall knowingly:
  1. Remove or render inoperative any air pollution or auxiliary air pollution control device installed subject to the requirements of this permit;
  2. Install any part or component when the principal effect of the part or component is to bypass, defeat or render inoperative any air pollution control device or auxiliary air pollution control device installed subject to the requirements of this permit; or
  3. Cause or allow engine exhaust gases to bypass any catalytic reduction device.

### 5.2. Monitoring Requirements

#### 5.2.1. Catalytic Oxidizer Control Devices

- a. The permittee shall regularly inspect, properly maintain and/or replace catalytic reduction devices and auxiliary air pollution control devices to ensure functional and effective operation of the engine's physical and operational design. The permittee shall ensure proper operation, maintenance and performance of catalytic reduction devices and auxiliary air pollution control devices by:
  1. Maintaining proper operation of the automatic air/fuel ratio controller or automatic feedback controller.
  2. Following the catalyst manufacturer emissions related operating and maintenance recommendations, or develop, implement, and follow a site-specific maintenance plan.

### 5.3. Testing Requirements

- 5.3.1. See Facility-Wide Testing Requirements Section 3.3.

#### **5.4. Recordkeeping Requirements**

- 5.4.1. To demonstrate compliance with section 5.1.1, the permittee shall maintain records of the maintenance performed on engines CE-01, CE-02, CE-03, and GE-01.
- 5.4.2. To demonstrate compliance with sections 5.1.2 – 5.1.6, the permittee shall maintain records of the amount of natural gas consumed and the hours of operation of each engine. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
- 5.4.3. To demonstrate compliance with section 5.1.7 the permittee shall maintain records of all catalytic reduction device maintenance, catalyst changes, including hours of operation since the last catalyst change. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

#### **5.5. Reporting Requirements**

- 5.5.1. See Facility-Wide Reporting Requirements Section 3.5.

### **6.0. Source-Specific Requirements (40 CFR 60 Subpart JJJJ Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, CE-01, CE-02, CE-03)**

*Any changes to 40 CFR Part 60, Subpart JJJJ shall supersede the 40 CFR Part 60, Subpart JJJJ requirements contained in this permit.*

#### **6.1. Limitations and Standards**

- 6.1.1. The provisions of this subpart are applicable to owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified below. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.
  - a. Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:
    1. On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);
    2. on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;
    3. on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or
    4. on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).
  - b. Owners and operators of stationary SI ICE that commence modification or reconstruction after June 12, 2006.  
[40CFR§60.4230(a)]

- 6.1.2. The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand. [40CFR§60.4230(b)]
- 6.1.3. If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable. [40CFR§60.4230(c)]
- 6.1.4. Stationary SI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR parts 90 and 1048, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security. [40CFR§60.4230(e)]
- 6.1.5. Owners and operators of facilities with internal combustion engines that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines. [40CFR§60.4230(f)]

**6.2. Emission Standards for Owners and Operators**

- 6.2.1. Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified. [40CFR§60.4233(e)]

Table 6.2.1. NO<sub>x</sub>, CO, and VOC Emission Standards for Stationary Non-Emergency SI ≥ 100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines > 25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards <sup>a</sup>					
			g/HP-hr			ppmvd at 15% O <sub>2</sub>		
			NO <sub>x</sub>	CO	VOC <sup>d</sup>	NO <sub>x</sub>	CO	VOC <sup>d</sup>
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350)	HP≥500	7/1/2010	1.0	2.0	0.7	82	270	60

<sup>a</sup> Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O<sub>2</sub>.

<sup>b</sup> Owners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2a do not have to comply with the CO emission standards of Table 1 of this subpart.

<sup>c</sup> The emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO<sub>x</sub>+ HC.

<sup>d</sup> For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

- 6.2.2. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine. [40CFR§60.4234]

### **6.3. Other Requirements for Owners and Operators**

- 6.3.1. After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in §60.4233. [40CFR§60.4236(a)]
- 6.3.2. After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010. [40CFR§60.4236(b)]
- 6.3.3. The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location. [40CFR§60.4236(e)]

### **6.4. Compliance Requirements for Owners and Operators**

- 6.4.1. If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.
- a. Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.
  - b. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.
    1. If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.
    2. If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance. [40CFR§60.4243(b)]
- 6.4.2. Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and

operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233. [40CFR§60.4243(e)]

- 6.4.3. It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [40CFR§60.4243(g)]

## 6.5. Testing Requirements for Owners and Operators

- 6.5.1. Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

- a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart. [40CFR§60.4244(a)]
- b. You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine. [40CFR§60.4244(b)]
- c. You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour. [40CFR§60.4244(c)]
- d. To determine compliance with the NO<sub>x</sub> mass per unit output emission limitation, convert the concentration of NO<sub>x</sub> in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 1})$$

Where:

ER = Emission rate of NO<sub>x</sub> in g/HP-hr.

C<sub>d</sub> = Measured NO<sub>x</sub> concentration in parts per million by volume (ppmv).

1.912×10<sup>-3</sup> = Conversion constant for ppm NO<sub>x</sub> to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

[40CFR§60.4244(d)]

- d. To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 2})$$

Where:

ER = Emission rate of CO in g/HP-hr.

$C_d$  = Measured CO concentration in ppmv.

$1.164 \times 10^{-3}$  = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

[40CFR§60.4244(e)]

- e. For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

ER = Emission rate of VOC in g/HP-hr.

$C_d$  = VOC concentration measured as propane in ppmv.

$1.833 \times 10^{-3}$  = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

[40CFR§60.4244(f)]

- f. If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{mi}}{C_{pi}} \quad (\text{Eq. 4})$$

Where:

$RF_i$  = Response factor of compound i when measured with EPA Method 25A.

$C_{mi}$  = Measured concentration of compound i in ppmv as carbon.

$C_{Ai}$  = True concentration of compound i in ppmv as carbon.

$$C_{i_{meas}} = RF_i \times C_{i_{corr}} \quad (\text{Eq. 5})$$

Where:

$C_{i_{corr}}$  = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

$C_{i_{meas}}$  = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{P_{eq}} = 0.6098 \times C_{i_{corr}} \quad (\text{Eq. 6})$$

Where:

$C_{P_{eq}}$  = Concentration of compound i in mg of propane equivalent per DSCM.

[40CFR§60.4244(g)]

## 6.6. Notification, Reports, and Records for Owners and Operators

6.6.1. Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

a. Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

1. All notifications submitted to comply with this subpart and all documentation supporting any notification.
2. Maintenance conducted on the engine.
3. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90 and 1048.
4. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

[40CFR§60.4245(a)]

b. Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.

1. Name and address of the owner or operator;
2. The address of the affected source;
3. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
4. Emission control equipment; and
5. Fuel used.

[40CFR§60.4245(c)]

c. Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed. [40CFR§60.4245(d)]

**7.0. Source-Specific Requirements (40 CFR 63 Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, CE-01, CE-02, CE-03, GE-01)**

*Any changes to 40 CFR Part 63, Subpart ZZZZ shall supersede the 40 CFR Part 63, Subpart ZZZZ requirements contained in this permit.*

**7.1. Limitations and Standards**

7.1.1. You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(c) An area source of HAP emissions is a source that is not a major source.  
[40CFR§63.6585(c)]

7.1.2. Existing stationary RICE (GE-01).

a. For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006. [40CFR§63.6590(a)(1)(iii)]

b. A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE. [40CFR§63.6590(a)(1)(iv)]

7.1.3. New stationary RICE. A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006. [40CFR§63.6590(a)(2)(iii)] (CE-01, CE-02, CE-03)

7.1.4. Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) 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 or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part. (CE-01, CE-02, CE-03)

(1) A new or reconstructed stationary RICE located at an area source;  
[40CFR§63.6590(c)(1)]

**7.2. When do I have to comply with this subpart (GE-01)**

7.2.1. An existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013. [40CFR§63.6595(a)]

**7.3. Emission and Operating Limitations (GE-01)**

7.3.2. 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 and the operating limitations in Table 2b to this subpart that apply to you. [40CFR§63.6303(a)]

Table 7.3.2. 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 . . .
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4. Emergency stationary CI RICE and black start stationary CI RICE. <sup>2</sup>	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect air cleaner 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.	

<sup>1</sup>Sources 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.

<sup>2</sup>If 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.

**7.4. What are my general requirements for complying with this subpart (GE-01)**

- 7.4.1. You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times. [60CFR§63.6605(a)]
- 7.4.2. 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. [40CFR§63.6605(b)]

**7.5. How do I demonstrate continuous compliance with the emissions limitations and operating limitations (GE-01)**

- 7.5.1. You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart. [40CFR§63.6640(a)]
- 7.5.2. You must also report each instance in which you did not meet the requirements in Table 8 (see section on General Provisions below) to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use

stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE. [40CFR§63.6640(e)]

- 7.5.3. 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 paragraphs (f)(2)(i) through (iii) 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.
    - (ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
    - (iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
  - (3) Emergency stationary RICE located at major 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. 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 supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
  - (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.  
 [40CFR§63.6640(f)]

**7.6. What records must I keep (GE-01)**

7.6.1. You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you. [40CFR§63.6655(d)]

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
9. Existing emergency and black start stationary RICE located at an area source of HAP,	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.

7.6.2. 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. [40CFR§63.6655(e)(2)]

## **8.0. Source-Specific Requirements (40CFR60 Subpart OOOO Requirements, CE-01, CE-02, CE-03)**

*Any changes to 40 CFR Part 60, Subpart OOOO shall supersede the 40 CFR Part 60, Subpart OOOO requirements contained in this permit.*

### **8.1. Limitations and Standards**

8.1.1. You must comply with the standards in paragraphs (a) through (d) of this section for each reciprocating compressor affected facility.

a. You must replace the reciprocating compressor rod packing according to either paragraph (a)(1) or (2) of this section or you must comply with paragraph (a)(3) of this section

1. Before the compressor has operated for 26,000 hours. The number of hours of operation must be continuously monitored beginning upon initial startup of your reciprocating compressor affected facility, or October 15, 2012, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.

2. Prior to 36 months from the date of the most recent rod packing replacement, or 36 months from the date of startup for a new reciprocating compressor for which the rod packing has not yet been replaced.

3. Collect the emissions from the rod packing using a rod packing emissions collection system which operates under negative pressure and route the rod packing emissions to a process through a closed vent system that meets the requirements of §60.5411(a)

b. You must demonstrate initial compliance with standards that apply to reciprocating compressor affected facilities as required by § 60.5410.

c. You must demonstrate continuous compliance with standards that apply to reciprocating compressor affected facilities as required by § 60.5415.

d. You must perform the required notification, recordkeeping, and reporting as required by § 60.5420.  
[40CFR§60.5385, Reciprocating Compressor Engines]

8.1.2. *§60.5411(a) Closed Vent System Requirements for reciprocating compressors.* You must meet the applicable requirements of this section for each closed vent system used to comply by § 60.5385(a)(3).

1. You must design the closed vent system to route all gases, vapors, and fumes emitted from the material in the reciprocating compressor rod packing emissions collection system or the wet seal fluid degassing system to a control device or to a process that meets the requirements specified in §60.5412(a) through (c).

2. You must design and operate the closed vent system with no detectable emissions as demonstrated by §60.5416(b).
3. You must meet the requirements specified in paragraphs (a)(3)(i) and (ii) of this section if the closed vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device.
  - (i) Except as provided in paragraph (a)(3)(ii) of this section, you must comply with either paragraph (a)(3)(i)(A) or (B) of this section for each bypass device.
    - (A) You must properly install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that could divert the stream away from the control device or process to the atmosphere that is capable of taking periodic readings as specified in §60.5416(a)(4) and sounds an alarm when the bypass device is open such that the stream is being, or could be, diverted away from the control device or process to the atmosphere.
    - (B) You must secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration.
  - (ii) Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (a)(3)(i) of this section.  
[40CFR§60.5411(a)]

## **8.2. Initial Compliance Demonstration**

- 8.2.1. You must determine initial compliance with the standards for each affected facility using the requirements in paragraph (c) of this section. The initial compliance period begins on October 15, 2012 or upon initial startup, whichever is later, and ends no later than one year after the initial startup date for your affected facility or no later than one year after October 15, 2012. The initial compliance period may be less than one full year.
  - c. To achieve initial compliance with the standards for each reciprocating compressor affected facility you must comply with paragraphs (c)(1) through (4) of this section.
    1. If complying with §60.5385(a)(1) or (2), during the initial compliance period, you must continuously monitor the number of hours of operation or track the number of months since the last rod packing replacement.
    2. If complying with §60.5385(a)(3), you must operate the rod packing emissions collection system under negative pressure and route emissions to a process through a closed vent system that meets the requirements of §60.5411(a).
    3. You must submit the initial annual report for your reciprocating compressor as required in § 60.5420(b).
    4. You must maintain the records as specified in § 60.5420(c)(3) for each reciprocating compressor affected facility.  
[40CFR§60.5410, Reciprocating Compressor Engines]

## **8.3. Continuous Compliance Demonstration**

- 8.3.1. For each reciprocating compressor affected facility complying with §60.5385(a)(1) or (2), you must demonstrate continuous compliance according to paragraphs (c)(1) through (3) of this section. For each reciprocating compressor affected facility complying with §60.5385(a)(3), you must demonstrate continuous compliance according to paragraph (c)(4) of this section.

1. You must continuously monitor the number of hours of operation for each reciprocating compressor affected facility or track the number of months since initial startup, or October 15, 2012, or the date of the most recent reciprocating compressor rod packing replacement, whichever is later.
2. You must submit the annual report as required in § 60.5420(b) and maintain records as required in § 60.5420(c)(3).
3. You must replace the reciprocating compressor rod packing before the total number of hours of operation reaches 26,000 hours or the number of months since the most recent rod packing replacement reaches 36 months.
4. You must operate the rod packing emissions collection system under negative pressure and continuously comply with the closed vent requirements in §60.5411(a).  
[40CFR§60.5415(c), Reciprocating Compressor Engines]

#### **8.4. Notification, Recordkeeping and Reporting Requirements**

- 8.4.1. Notifications. If you own or operate a reciprocating compressor affected facility you are not required to submit the notifications required in §60.7(a)(1), (3), and (4).  
[40CFR§60.5420(a)]
  
- 8.4.2. Reporting requirements. You must submit annual reports containing the information specified in paragraphs (b)(4) of this section to the Administrator and performance test reports as specified in paragraph (b)(7) of this section. The initial annual report is due 30 days after the end of the initial compliance period as determined according to § 60.5410. Subsequent annual reports are due on the same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (6) of this section. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.
  1. The general information specified in paragraphs (b)(1)(i) through (iv) of this section.
    - (i) The company name and address of the affected facility.
    - (ii) An identification of each affected facility being included in the annual report.
    - (iii) Beginning and ending dates of the reporting period.
    - (iv) A certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
  2. *Reserved*
  3. *Reserved*
  4. For each reciprocating compressor affected facility, the information specified in paragraphs (b)(4)(i) through (ii) of this section.

(i) The cumulative number of hours of operation or the number of months since initial startup, October 15, 2012, or since the previous reciprocating compressor rod packing replacement, whichever is later.

(ii) Records of deviations specified in paragraph (c)(3)(iii) of this section that occurred during the reporting period.

7. (i) Within 60 days after the date of completing each performance test (see § 60.8 of this part) as required by this subpart you must submit the results of the performance tests required by this subpart to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). Performance test data must be submitted in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (see <http://www.epa.gov/ttn/chief/ert/index.html>). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority.

(ii) All reports required by this subpart not subject to the requirements in paragraph (a)(2)(i) of this section must be sent to the Administrator at the appropriate address listed in § 63.13 of this part. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraph (a)(2)(i) and (ii) of this section in paper format.

[40CFR§60.5420]

8.4.3. Recordkeeping requirements. You must maintain the records identified as specified in § 60.7(f) and in paragraphs (c)(3), (7), (8), and (9) of this section. All records required by this subpart must be maintained either onsite or at the nearest local field office for at least 5 years

3. For each reciprocating compressors affected facility, you must maintain the records in paragraphs (c)(3)(i) through (iii) of this section.

(i) Records of the cumulative number of hours of operation or number of months since initial startup or October 15, 2012, or the previous replacement of the reciprocating compressor rod packing, whichever is later.

(ii) Records of the date and time of each reciprocating compressor rod packing replacement, or date of installation of a rod packing emissions collection system and closed vent system as specified in §60.5385(a)(3).

(iii) Records of deviations in cases where the reciprocating compressor was not operated in compliance with the requirements specified in § 60.5385.

[40CFR§60.5420]

7. A record of each cover inspection required under §60.5416(a)(3) for reciprocating compressors.

8. If you are subject to the bypass requirements of §60.5416(a)(4) for reciprocating compressors, a record of each inspection or a record each time the key is checked out or a record of each time the alarm is sounded.
9. If you are subject to the closed vent system no detectable emissions requirements of §60.5416(b) for reciprocating compressors, a record of the monitoring conducted in accordance with §60.5416(b).

## 9.0. Source-Specific Requirements (Microturbines, CT-01 thru CT-10)

### 9.1. Limitations and Standards

- 9.1.1. To demonstrate compliance with Section 9.1.2, the quantity of natural gas that shall be consumed in the 200 kW natural gas fired microturbine generator, Capstone C200 (CT-01 thru CT-10) shall not exceed 22,310 cubic feet per hour and  $195.4 \times 10^6$  cubic feet per year.
- 9.1.2. Maximum emissions from each 200 kW natural gas fired microturbine generator, Capstone C200 (CT-01 thru CT-10) shall not exceed the following limits.

Table 9.1.2. Emission Limits for Microturbines (CT-01 thru CT-10)

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.16	0.70
Carbon Monoxide	0.44	1.93
Volatile Organic Compounds	0.02	0.09

### 9.2. Recordkeeping Requirements

- 9.2.1. To demonstrate compliance with sections 9.1.1 through 9.1.2, the permittee shall maintain records of the amount of natural gas consumed in the microturbine generators and the hours of operation. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

## 10.0. Source-Specific Requirements (Heater, HTR-01)

### 10.1. Limitations and Standards

- 10.1.1. Maximum Design Heat Input. The maximum design heat input for the Heater (HTR-01) shall not exceed 9.7 MMBTU/hr.
- 10.1.2. Maximum emissions from the Heater (HTR-01) shall not exceed the following limits.

Table 10.1.2. Emission Limits for Heater (HTR-01)

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.95	4.17

Carbon Monoxide	0.80	3.51
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- 10.1.3. 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.]

## 10.2. Monitoring Requirements

- 10.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with section 10.1.3 of this permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

## 10.3. Testing Requirements

- 10.3.1. Upon request by the director, compliance with the visible emission requirements of section 10.1.3 of this permit shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of section 10.1.3 of this permit. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control. [45CSR§2-3.2.]

## 10.4. Recordkeeping Requirements

- 10.4.1. To demonstrate compliance with sections 10.1.1 and 10.1.2, the permittee shall maintain records of the amount of natural gas consumed in the 9.7 MMBTU/hr Heater (HTR-01) and the hours of operation. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
- 10.4.2. The permittee shall maintain records of all monitoring data required by Section 10.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note "out of service" (O/S) or equivalent.

## 10.5. Reporting Requirements

- 10.5.1. Any violation(s) of the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

## 11.0. Source-Specific Requirements (Produced Water/Condensate Tanks, TK-01, TK-02 Controlled by Vapor Combustors 01-COMB, 02-COMB)

### 11.1. Limitations and Standards

- 11.1.1. Emissions from the storage tanks (TK-01, TK-02) shall be controlled by the VOC Combustors (01-COMB, 02-COMB). The VOC Combustors (01-COMB, 02-COMB) shall be designed to achieve a minimum guaranteed control efficiency of 98% for volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions.
- 11.1.2. Emissions from the each of the Produced Water/Condensate Storage Vessels shall not exceed the following limits.

Table 11.1.2. Emissions Limits for Produced Water/Condensate Tanks (TK-01 and TK-02)

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Volatile Organic Compounds (VOC)	0.95	4.18
Hazardous Air Pollutants (HAP)	0.12	0.52

- 11.1.3. Maximum Tank Throughput Limitation. The throughput of the combined tanks (TK-01 and TK-02) shall not exceed 920,000 gallons per year. Compliance with the annual throughput limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the tank throughput at any given time during the previous twelve consecutive calendar months.
- 11.1.4. The potential for VOC and HAP emissions shall be calculated using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production. This determination will take into account the VOC Combustors (01-COMB, 02-COMB).

### 11.2. Monitoring Requirements

- 11.2.1. See Facility-Wide Monitoring Requirements 3.2.

### 11.3. Recordkeeping Requirements

- 11.3.1. To demonstrate compliance with requirements 11.1.1 and 11.1.2, the permittee shall maintain a record of the aggregate throughput for storage tanks (TK-01, TK-02). Alternatively, recording the monthly and rolling twelve month total of condensate/produced water liquids loaded into tank trucks from the storage tanks can be used to demonstrate compliance. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

## 12.0. Source-Specific Requirements (Tank Truck Loading, TLO)

### 12.1. Limitations and Standards

- 12.1.1. To demonstrate compliance with the Tank Truck Loading (TLO) emissions provided in Permit Application, R13-3206, the permittee shall not exceed a maximum throughput of 920,000 gallons per year. Compliance with the maximum annual throughput limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the tank truck product throughput at any given time during the previous twelve consecutive calendar months.
- 12.1.2. The Tank Truck Loading (TLO) shall be operated in accordance with the plans and specifications filed in Permit Application R13-3206.

### 12.2. Recordkeeping Requirements

- 12.2.1. To demonstrate compliance with the throughput limits and emissions limits filed in Permit Application R13-3206, the permittee shall maintain monthly and annual records to include the total quantity of material loaded into tank trucks. The annual records shall be calculated on a twelve month rolling total.

## 13.0. Source-Specific Requirements (Dehydration Units and Refrigeration System: DFT-01, -02; RBV-01, -02; DSV-01, -02, -03; 01-, 02-BTEX)

### 13.1. Limitations and Standards

- 13.1.1. The maximum dry natural gas throughput to the glycol dehydration units/still columns shall not exceed the throughput below.

Table 13.1.1. Throughput Limits for Glycol Dehydration Units (DSV-01 – DSV-03)

Emission Unit ID	Throughput
DSV-01	40 MMscf/day
DSV-02	40 MMscf/day
DSV-03	60 MMscf/day

Compliance with the maximum throughput limitation shall be determined using a twelve month rolling total. A twelve month total shall mean the sum of the monthly throughput at any given time during the previous twelve calendar months.

- 13.1.2. The maximum design heat input for each glycol dehydrator reboiler (RBV-01, RBV-02) shall not exceed 1.11 MMBtu/hr.
- 13.1.3. Maximum emissions from each of the Dehydrator Reboilers and Still Columns (RBV-01, DSV-01, RBV-02, DSV-02, DSV-03) shall not exceed the following limits.

Table 13.1.3. Emissions Limits for Dehydrator Reboilers, Still Columns, and Flash Tanks DSV-01, RBV-01, DFT-01, DSV-02, RBV-02, DFT-02, and DSV-03):

Emission Unit ID	Emission Point ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (tpy)
RBV-01 and RBV-02	9E and 12E	NO <sub>x</sub>	0.11	0.48
		CO	0.09	0.40
DSV-01 and DSV-02	8E and 11E	VOC	0.25	1.10
		Benzene	0.01	0.05
		Total HAP	0.09	0.39
DSV-03	13E	VOC	1.14	5.00
		Total HAP	0.57	2.50
DFT-01 and DFT-02	7E and 10E	VOC	0.56	2.43
		Total HAP	0.02	0.07

13.1.4. Emission Calculations for DSV-01 and DSV-02.

- a. For purposes of determining potential HAP emissions, the methods specified in 40 CFR 63, Subpart HH (i.e. excluding compressor engines from HAP PTE) shall be used.
- b. For the purposes of determining actual annual average natural gas throughput or actual average benzene emissions, the methods specified in § 63.772(b) of 40 CFR 63, Subpart HH shall be used. This applies to the exemption specified in § 63.764(e).

13.1.5. The glycol dehydration units (DSV-01, DSV-02, DFT-01, DFT-02) subject to this section shall be designed and operated in accordance with the following:

- a. The vapors/overheads from the still column shall be routed to the condensers (01-BTEX, 02-BTEX) at all times when there is a potential that vapors (emissions) can be generated from the still column. Non-condensables from the still column overheads shall be routed to the flame zone of the reboilers.
- b. The reboilers shall only be fired with natural gas or flash tank gas and natural gas may be used as a supplemental fuel.
- c. Flash tank off-gases shall be routed to the facility inlet for recycle/recompression or routed to the vapor combustors through a closed vent system (01-COMB, 02-COMB).
- d. The JATCO BTEX units (01-BTEX, 02-BTEX) shall be operated according to manufacturer's specifications and shall be properly maintained in a manner which prevents the units from freezing and to maintain the control efficiency of 95%

13.1.6. 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.]

**13.2. Monitoring Requirements**

- 13.2.1. The permittee shall monitor the throughput of dry natural gas fed to the dehydration system on a monthly basis for the glycol dehydration units (DSV-01, DSV-02, and DSV-03).
- 13.2.2. In order to demonstrate compliance with the area source status, claimed within sections 13.1.3 and 13.1.4 (except DSV-03), as well as the benzene exemption provided under section 13.1.4 (except

DSV-03), the following parameters shall be measured at least once quarterly, with the exception of natural gas flowrate annual daily average, natural gas flowrate maximum design capacity, and dry gas composition, in order to define annual average values or, if monitoring is not practical, some parameters may be assigned default values as listed below. DSV-03 can use another accepted method to demonstrate compliance such as Promax or HYSYS.

- a. Natural Gas Flowrate
  - i. Operating hours per quarter
  - ii. Quarterly throughput (MMscf/quarter)
  - iii. Annual daily average (MMscf/day), and
  - iv. Maximum design capacity (MMscf/day)
- b. Absorber temperature and pressure (except DSV-03, it does not have an absorber)
- c. Lean glycol circulation rate
- d. Glycol pump type and maximum design capacity (gpm)
- e. Flash tank temperature and pressure, if applicable
- f. Stripping Gas flow rate, if applicable
- g. Wet gas composition (upstream of the absorber – dehydration column) sampled in accordance with GPA method 2166 and analyzed consistent with GPA extended method 2286 as well as the procedures presented in the GRI-GLYCalc™ Technical Reference User Manual and Handbook V4
- h. Wet gas water content (lbs H<sub>2</sub>O/MMscf) (except DSV-03, since the gas has already been dehydrated)
- i. Dry gas water content (lbs H<sub>2</sub>O/MMscf) at a point directly after exiting the dehydration column and before any additional separation points (except DSV-03, since the gas has already been dehydrated)

The following operating parameter(s) may be assigned default values when using GRI-GLYCalc:

- a. Dry gas water content can be assumed to be equivalent to pipeline quality at 7 lb H<sub>2</sub>O / MMscf
- b. Wet gas water content can be assumed to be saturated
- c. Lean glycol water content if not directly measured may use the default value of 1.5 % water as established by GRI
- d. Lean glycol circulation rate may be estimated using the TEG recirculation ratio of 3 gal TEG / lb H<sub>2</sub>O removed.  
[45CSR§13-5.11, §63.722(b)(2)(i)]

- 13.2.3. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with section 13.1.7 of this permit. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

### 13.3. Testing Requirements

- 13.3.1. The permittee shall determine the composition of the wet natural gas by sampling in accordance with GPA Method 2166 and analyzing according to extended GPA Method 2286 analysis as specified in the GRI-GLYCalc™ V4 Technical Reference User Manual and Handbook. As specified in the handbook, the permittee shall sample the wet gas stream at a location prior to the glycol dehydration contactor column, but after any type of separation device accordance with GPA method 2166. The permittee may utilize other equivalent methods provided they are approved in advance by DAQ as part of a testing protocol. If alternative methods are proposed, a test protocol shall be submitted for approval no later than 60 days before the scheduled test date. The initial compliance test must be conducted within 180 days of permit issuance or within 180 days of startup of the glycol dehydration unit, whichever is later.

Note: The DAQ defines a representative wet gas sample to be one that is characteristic of the average gas composition dehydrated throughput a calendar year. If an isolated sample is not

indicative of the annual average composition, the permittee may opt to produce a weighted average based on throughput between multiple sampling events, which can be used to define a more representative average annual gas composition profile. [45CSR§13-5.11]

- 13.3.2. Upon request by the director, compliance with the visible emission requirements of section 13.1.6 of this permit shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of section 13.1.7 of this permit. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control. [45CSR§2-3.2.]

#### **13.4. Recordkeeping Requirements**

- 13.4.1. The permittee shall maintain a record of the monthly dry natural gas throughput through the glycol dehydration units to demonstrate compliance with section 13.1.1 of this permit. Said records shall be maintained for a period of five (5) years on site or in a readily accessible off-site location maintained by the permittee. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
- 13.4.2. For the purpose of demonstrating compliance with the emission limitations, the permittee shall maintain records of all monitoring data, and GRI-GLYCalc<sup>TM</sup>, Promax, or HYSYS emission estimates. Said records shall be maintained for a period of five (5) years on site or in a readily accessible off-site location maintained by the permittee. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
- 13.4.3. The permittee shall maintain records of all monitoring data required by section 13.2.3 of this permit documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9.
- 13.4.4. *Record of Maintenance of Air Pollution Control Equipment.* The permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
- 13.4.5. *Record of Malfunctions of Air Pollution Control Equipment.* 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.

### **13.5. Reporting Requirements**

- 13.5.1. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

### **14.0. Source-Specific Requirements (Dehydration Units with Exemption from NESHAP Standard, Subpart HH §63.764(d)) (DSV-01 and DSV-02)**

*Any changes to 40 CFR Part 63, Subpart HH shall supersede the 40 CFR Part 63, Subpart HH requirements contained in this permit.*

#### **14.1. Limitations and Standards**

- 14.1.1. Facilities that are area sources of hazardous air pollutants (HAP) as defined in § 63.761. Emissions for major source determination purposes can be estimated using the maximum natural gas or hydrocarbon liquid throughput, as appropriate, calculated in paragraphs (1)(i) through (iii) of this section. As an alternative to calculating the maximum natural gas or hydrocarbon liquid throughput, the owner or operator of a new or existing source may use the facility's design maximum natural gas or hydrocarbon liquid throughput to estimate the maximum potential emissions. Other means to determine the facility's major source status are allowed, provided the information is documented and recorded to the Administrator's satisfaction in accordance with § 63.10(b)(3).

- (i) If the owner or operator documents, to the Administrator's satisfaction, a decline in annual natural gas or hydrocarbon liquid throughput, as appropriate, each year for the 5 years prior to October 15, 2012, the owner or operator shall calculate the maximum natural gas or hydrocarbon liquid throughput used to determine maximum potential emissions according to the requirements specified in paragraph (1)(i)(A) of this section. In all other circumstances, the owner or operator shall calculate the maximum throughput used to determine whether a facility is a major source in accordance with the requirements specified in paragraph (1)(i)(B) of this section.

- (A) The maximum natural gas or hydrocarbon liquid throughput is the average of the annual natural gas or hydrocarbon liquid throughput for the 3 years prior to October 15, 2012, multiplied by a factor of 1.2.

- (B) The maximum natural gas or hydrocarbon liquid throughput is the highest annual natural gas or hydrocarbon liquid throughput over the 5 years prior to October 15, 2012, multiplied by a factor of 1.2.
- (ii) The owner or operator shall maintain records of the annual facility natural gas or hydrocarbon liquid throughput each year and upon request submit such records to the Administrator. If the facility annual natural gas or hydrocarbon liquid throughput increases above the maximum natural gas or hydrocarbon liquid throughput calculated in paragraph (1)(i)(A) or (1)(i)(B) of this section, the maximum natural gas or hydrocarbon liquid throughput must be recalculated using the higher throughput multiplied by a factor of 1.2.
- (iii) The owner or operator shall determine the maximum values for other parameters used to calculate emissions as the maximum for the period over which the maximum natural gas or hydrocarbon liquid throughput is determined in accordance with paragraph (1)(i)(A) or (B) of this section. Parameters, other than glycol circulation rate, shall be based on either highest measured values or annual average. For estimating maximum potential emissions from glycol dehydration units, the glycol circulation rate used in the calculation shall be the unit's maximum rate under its physical and operational design consistent with the definition of potential to emit in § 63.2.  
[NESHAP, Subpart HH; § 63.760 (a)(1)]
- 14.1.2. For area sources, the affected source includes each triethylene glycol (TEG) dehydration unit located at a facility that meets the criteria specified in § 63.760(a).  
[NESHAP, Subpart HH; § 63.760 (b)(2)]
- 14.1.3. Any source that determines it is not a major source but has actual emissions of 5 tons per year or more of a single HAP, or 12.5 tons per year or more of a combination of HAP (*i.e.*, 50 percent of the major source thresholds), shall update its major source determination within 1 year of the prior determination or October 15, 2012, whichever is later, and each year thereafter, using gas composition data measured during the preceding 12 months.  
[NESHAP, Subpart HH; § 63.760 (c)]
- 14.1.4. The owner and operator of a facility that does not contain an affected source as specified in § 63.760 (b) are not subject to the requirements of this subpart.  
[NESHAP, Subpart HH; § 63.760 (d)]
- 14.1.5. Unless otherwise required by law, the owner or operator of an area source subject to the provisions of this subpart is exempt from the permitting requirements established by 40 CFR part 70 or 40 CFR part 71. [NESHAP, Subpart HH; § 63.760 (h)]
- 14.1.6. *Exemptions.* (1) The owner or operator of an area source is exempt from the requirements of paragraph (d) of § 63.764 if the criteria listed in paragraph (1)(i) or (ii) of this section are met, except that the records of the determination of these criteria must be maintained as required in § 63.774(d)(1).
- (i) The actual annual average flowrate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day, as determined by the procedures specified in § 63.772(b)(1) of this subpart; or
- (ii) The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year, as determined by the procedures specified in § 63.772(b)(2) of this subpart.  
[NESHAP, Subpart HH; § 63.764 (e)]

14.1.7. Table 2 of this subpart specifies the provisions of subpart A (General Provisions) of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart. [NESHAP, Subpart HH; § 63.764 (a)]

14.1.8. *Affirmative defense for violations of emission standards during malfunction.*

(a) The provisions set forth in this subpart shall apply at all times.

(b)-(c) *Reserved.*

(d) In response to an action to enforce the standards set forth in this subpart, you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined in 40 CFR 63.2. Appropriate penalties may be assessed; however, if you fail to meet your burden of proving all of the requirements in the affirmative defense, the affirmative defense shall not be available for claims for injunctive relief.

(1) To establish the affirmative defense in any action to enforce such a standard, you must timely meet the reporting requirements in paragraph (d)(2) of this section, and must prove by a preponderance of evidence that:

(i) The violation:

(A) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner; and

(B) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and

(C) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(D) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(ii) Repairs were made as expeditiously as possible when a violation occurred. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and

(iii) The frequency, amount and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and

(iv) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(v) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment, and human health; and

(vi) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(vii) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and

(viii) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and

(ix) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also

specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

- (2) *Report.* The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in paragraph (d)(1) of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.  
[NESHAP, Subpart HH; §63.762]

## 14.2. Testing Requirements

14.2.1. *Determination of glycol dehydration unit flowrate, benzene emissions, or BTEX emissions.* The procedures of this paragraph shall be used by an owner or operator to determine glycol dehydration unit natural gas flowrate, benzene emissions, or BTEX emissions.

(1) The determination of actual flowrate of natural gas to a glycol dehydration unit shall be made using the procedures of either paragraph (1)(i) or (1)(ii) of this section.

- (i) The owner or operator shall install and operate a monitoring instrument that directly measures natural gas flowrate to the glycol dehydration unit with an accuracy of plus or minus 2 percent or better. The owner or operator shall convert annual natural gas flowrate to a daily average by dividing the annual flowrate by the number of days per year the glycol dehydration unit processed natural gas.
- (ii) The owner or operator shall document, to the Administrator's satisfaction, the actual annual average natural gas flowrate to the glycol dehydration unit.

(2) The determination of actual average benzene or BTEX emissions from a glycol dehydration unit shall be made using the procedures of either paragraph (2)(i) or (ii) of this section. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.

- (i) The owner or operator shall determine actual average benzene or BTEX emissions using the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1); or
- (ii) The owner or operator shall determine an average mass rate of benzene or BTEX emissions in kilograms per hour through direct measurement using the methods in § 63.772(a)(1)(i) or (ii), or an alternative method according to § 63.7(f). Annual emissions in kilograms per year shall be determined by multiplying the mass rate by the number of hours the unit is operated per year. This result shall be converted to megagrams per year.  
[NESHAP, Subpart HH; § 63.772 (b)]

### 14.3. Recordkeeping Requirements

- 14.3.1. The recordkeeping provisions of 40 CFR part 63, subpart A, that apply and those that do not apply to owners and operators of sources subject to this subpart are listed in Table 2 of this subpart. [NESHAP, Subpart HH; § 63.774 (a)]
- 14.3.2. *Exemption Records.* An owner or operator of a glycol dehydration unit that meets the exemption criteria in § 63.764(e)(1)(i) or § 63.764(e)(1)(ii) shall maintain the records specified in paragraph (i) or paragraph (ii) of this section, as appropriate, for that glycol dehydration unit.
- (i) The actual annual average natural gas throughput (in terms of natural gas flowrate to the glycol dehydration unit per day) as determined in accordance with § 63.772(b)(1), or
  - (ii) The actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with § 63.772(b)(2).  
[NESHAP, Subpart HH; § 63.774 (d)(1)]

### 14.4. Reporting Requirements

- 14.4.1. An owner or operator of a TEG dehydration unit located at an area source that meets the criteria in § 63.764(e)(1)(i) or § 63.764(e)(1)(ii) is exempt from the reporting requirements for area sources in paragraphs (c)(1) through (7) of this section, for that unit. [NESHAP, Subpart HH; § 63.775 (c)(8)]
- 14.4.2. *Notification of Compliance Status Reports.*  
Area sources that meet § 63.764(e) do not have to submit initial notifications.  
[Table 2 to Subpart HH of Part 63; §63.9(b)(2)]

## 15.0. Source-Specific Requirements (Vapor Combustors, 01-COMB, 02-COMB)

### 15.1. Limitations and Standards

- 15.1.1. The vapor combustors (01-COMB, 02-COMB) shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
- 15.1.2. The vapor combustors (01-COMB, 02-COMB) shall be operated, with a flame present at all times whenever emissions may be vented to them.
- 15.1.3. The presence of a pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
- 15.1.4. The vapor combustors (01-COMB, 02-COMB) are subject to 45CSR6. The requirements of 45CSR6 include but are not limited to the following:
- i. No person shall cause, suffer, allow or permit particulate matter to be discharged from any incinerator into the open air in excess of the quantity determined by use of the following formula:

$$\text{Emissions (lb/hr)} = F \times \text{Incinerator Capacity (tons/hr)}$$

Where, the factor, F, is either 5.43 for an incinerator with a capacity of less than 15,000 lbs/hr or 2.72 for an incinerator with a capacity of 15,000 lbs/hr or greater. [45CSR6 §4.1]

- ii. No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater. [45CSR6 §4.3]
  - iii. The provisions of paragraph (i) shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per startup. [45CSR6 §4.4]
  - iv. No person shall cause or allow the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air. [45CSR6 §4.5]
  - v. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors. [45CSR6 §4.6]
  - vi. Due to unavoidable malfunction of equipment, emissions exceeding those provided for in this rule may be permitted by the Director for periods not to exceed five (5) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director. [45CSR6 §8.2]
- 15.1.5. *Operation and Maintenance of Air Pollution Control Equipment.* The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in the General Permit Registration and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. [45CSR§13-5.11.]

## 15.2. Monitoring Requirements

- 15.2.1. The permittee shall conduct visible emission checks and/or opacity monitoring for the vapor combustors. The visible emission checks shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at the vapor combustors for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal affected facility operation and appropriate weather conditions.

If visible emissions are present for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

- 15.2.2. To demonstrate compliance with the flame requirements of sections 15.1.2 and 15.1.3, the presence of a flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

### 15.3. Testing Requirements

- 15.3.1. In order to demonstrate initial compliance with the opacity requirements of 15.1.4, the permittee shall conduct a Method 22 opacity test for at least two hours. This test shall demonstrate no visible emissions are observed for more than a total of five (5) minutes during any two consecutive hour period using Method 22 in Appendix A of 40 CFR Part 60. The permittee shall conduct this test within thirty (30) days of start-up of the incinerator. The visible emission checks shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR 60, Appendix A, Method 22 or from the lecture portion of 40 CFR 60, Appendix A, Method 9 certification course.
- 15.3.2. The Secretary may conduct such other tests as the Secretary may deem necessary to evaluate air pollution emissions other than those noted above. [45CSR6 §7.2]

### 15.4. Recordkeeping Requirements

- 15.4.1. For the purpose of demonstrating compliance with section 15.2.2, the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent.
- 15.4.2. For the purpose of demonstrating compliance with section 15.2.1, the permittee shall maintain records of the visible emission opacity tests and checks. The permittee shall maintain records of all monitoring data required by section 15.3.1 of this permit documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name of means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6-10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the evaluation, the record of observation may note "out of service" (O/S) or equivalent.
- 15.4.3. All records required under Section 5.4 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
- 15.4.4. *Record of Maintenance of Air Pollution Control Equipment.* The permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
- 15.4.5. *Record of Malfunctions of Air Pollution Control Equipment.* 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.

### **15.5. Reporting Requirements**

- 15.5.1. Any deviation(s) of the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
- 15.5.2. Upon request by the Director, the permittee shall report deviations within a requested time from of any occurrences when the control device was operated outside of the parameters defined in the monitoring plan.

### **16.0. Source-Specific Requirements (40 CFR 60 Subpart OOOO Requirements, Equipment Leak Standards, Refrigeration Plant))**

*Any changes to 40 CFR Part 60, Subpart OOOO shall supersede the 40 CFR Part 60, Subpart OOOO requirements contained in this permit.*

#### **16.1. Limitations and Standards**

- 16.1.1. The permittee is exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.  
[40 C.F.R. § 60.5370(c)]
- 16.1.2. Equipment Leak Standards.  
This section applies to the group of all equipment, except compressors, within a process unit.
  - (a) You must comply with the requirements of §§60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in §60.5401.
  - (b) You may elect to comply with the requirements of §§60.483-1a and 60.483-2a, as an alternative.

- (c) You 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 according to the requirements of §60.5402 of this subpart.
- (d) You must comply with the provisions of §60.485a of this part except as provided in paragraph (f) of this section.
- (e) You must comply with the provisions of §§60.486a and 60.487a of this part except as provided in §§60.5401, 60.5421, and 60.5422 of this part.
- (f) You must use the following provision instead of §60.485a(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining the percent VOC content of the process fluid that is contained in or contacts a piece of equipment, procedures that conform to the methods described in ASTM E169-93, E168-92, or E260-96 (incorporated by reference as specified in §60.17) must be used.  
[40 C.F.R. § 60.5400]

#### 16.1.3. Equipment Leak Standards.

- (a) You may comply with the following exceptions to the provisions of §60.5400(a) and (b).
- (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 §60.485a(b) except as provided in §60.5400(c) and in paragraph (b)(4) of this section, and §60.482-4a(a) through (c) of subpart VVa.
- (2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.
- (3) (i) When a leak is detected, it must be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in §60.482-9a.
- (ii) A first attempt at repair must 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 non-plant 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 §60.482-4a(b)(1) of subpart VVa.
- (ii) No pressure relief device described in paragraph (b)(4)(i) of this section must 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 §60.482-5a.
- (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 §§60.482-2a(a)(1) and 60.482-7a(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 §§60.482-2a(a)(1), 60.482-7a(a), and paragraph (b)(1) of this section.
- (f) An owner or operator may use the following provisions instead of §60.485a(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 D86-96 (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 D86-96 (incorporated by reference as specified in §60.17).
- (g) An owner or operator may use the following provisions instead of §60.485a(b)(2): A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in §60.486a(e)(8). Divide these readings by the initial calibration values for each scale and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

[40 C.F.R. § 60.5401]

#### 16.1.4. Alternative Emission Limitations for Equipment Leaks

- (a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under any design, equipment, work practice or operational standard, the Administrator will publish, in the Federal Register, a notice permitting the use of that alternative means for the purpose of compliance with that standard. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.
- (b) Any notice under paragraph (a) of this section must be published only after notice and an opportunity for a public hearing.
- (c) The Administrator will consider applications under this section from either owners or operators of affected facilities, or manufacturers of control equipment.
- (d) The Administrator will treat applications under this section according to the following criteria, except in cases where the Administrator concludes that other criteria are appropriate:
  - (1) The applicant must collect, verify and submit test data, covering a period of at least 12 months, necessary to support the finding in paragraph (a) of this section.
  - (2) If the applicant is an owner or operator of an affected facility, the applicant must commit in writing to operate and maintain the alternative means so as to achieve a reduction in

VOC emissions at least equivalent to the reduction in VOC emissions achieved under the design, equipment, work practice or operational standard.  
[40 C.F.R. § 60.5402]

## 16.2. Initial Compliance Demonstration

- 16.2.1. The initial compliance period begins on October 15, 2012 or upon initial startup, whichever is later, and ends no later than one year after the initial startup date for your affected facility or no later than one year after October 15, 2012. The initial compliance period may be less than one full year. [40CFR§60.5410]
- 16.2.2. For affected facilities at onshore natural gas processing plants, initial compliance with the VOC requirements is demonstrated if you are in compliance with the requirements of §60.5400. [40CFR§60.5410(f)]

## 16.3. Continuous Compliance Demonstration

- 16.3.1. For affected facilities at onshore natural gas processing plants, continuous compliance with VOC requirements is demonstrated if you are in compliance with the requirements of § 60.5400. [40CFR§60.5415(f)]

## 16.4. Reporting, and Recordkeeping Requirements

16.4.1. **Reporting requirements.** You must submit annual reports containing the information specified in paragraphs (b)(1) through (6) of this section to the Administrator and performance test reports as specified in paragraph (b)(7) or (8) of this section. The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to §60.5410. Subsequent annual reports are due no later than same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (6) of this section. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

- (1) The general information specified in paragraphs (b)(1)(i) through (iv) of this section.
  - (i) The company name and address of the affected facility.
  - (ii) An identification of each affected facility being included in the annual report.
  - (iii) Beginning and ending dates of the reporting period.
  - (iv) A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (7) (i) Within 60 days after the date of completing each performance test (see §60.8 of this part) as required by this subpart, except testing conducted by the manufacturer as specified in §60.5413(d), you must submit the results of the performance tests required by this subpart to the EPA as follows. You must use the latest version of the EPA's Electronic Reporting Tool (ERT) (see <http://www.epa.gov/ttn/chief/ert/index.html>) existing at the time of the performance test to generate a submission package file, which documents the performance test. You must then submit the file generated by the ERT through the EPA's Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed by logging in to the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). Only data collected using test methods supported by the ERT as listed on the ERT Web site are subject to this requirement for submitting reports electronically. Owners or operators who claim that some of the information being

submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator shall submit the results of the performance test to the Administrator at the appropriate address listed in §60.4.

- (ii) All reports, except as specified in paragraph (b)(8) of this section, required by this subpart not subject to the requirements in paragraph (a)(2)(i) of this section must be sent to the Administrator at the appropriate address listed in §60.4 of this part. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy).  
[40CFR§60.5420(b)]

#### 16.4.2. Recordkeeping Requirements.

- (a) You must comply with the requirements of paragraph (b) of this section in addition to the requirements of §60.486a.
- (b) The following recordkeeping requirements apply to pressure relief devices subject to the requirements of §60.5401(b)(1) of this subpart.
  - (1) When each leak is detected as specified in §60.5401(b)(2), a weatherproof and readily visible identification, marked with the equipment identification number, must be attached to the leaking equipment. The identification on the pressure relief device may be removed after it has been repaired.
  - (2) When each leak is detected as specified in §60.5401(b)(2), the following information must 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 500 ppm” if the maximum instrument reading measured by the methods specified in paragraph (a) of this section after each repair attempt is 500 ppm or greater.
    - (v) “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.

(x) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §60.482-4a(a). The designation of equipment subject to the provisions of §60.482-4a(a) must be signed by the owner or operator.

[40CFR§60.5421]

16.4.3. Additional Reporting Requirements.

(a) You must comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of §60.487a(a), (b), (c)(2)(i) through (iv), and (c)(2)(vii) through (viii).

(b) An owner or operator must include the following information in the initial semiannual report in addition to the information required in §60.487a(b)(1) through (4): Number of pressure relief devices subject to the requirements of §60.5401(b) except for those pressure relief devices designated for no detectable emissions under the provisions of §60.482-4a(a) and those pressure relief devices complying with §60.482-4a(c).

(c) An owner or operator must include the following information in all semiannual reports in addition to the information required in §60.487a(c)(2)(i) through (vi):

(1) Number of pressure relief devices for which leaks were detected as required in §60.5401(b)(2); and

(2) Number of pressure relief devices for which leaks were not repaired as required in §60.5401(b)(3).

[40CFR§60.5422]

### CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached \_\_\_\_\_, representing the period beginning \_\_\_\_\_ and ending \_\_\_\_\_, and any supporting documents appended hereto, is true, accurate, and complete.

Signature<sup>1</sup> \_\_\_\_\_  
(please use blue ink) Responsible Official or Authorized Representative Date

Name & Title \_\_\_\_\_  
(please print or type) Name Title

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

<sup>1</sup> This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
  - (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
  - (ii) the delegation of authority to such representative is approved in advance by the Director;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or
- d. The designated representative delegated with such authority and approved in advance by the Director.