

# Permit to Construct



**R13- 2828**

*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:*

**Allmine Paving, LLC**  
**Inwood Facility**  
**003-00137**

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*John A. Benedict*  
*Director*

*Issued: DRAFT • Effective: DRAFT*

Facility Location: Inwood, Berkeley County, West Virginia  
Mailing Address: 300 Foxcroft Avenue, Suite 201, Martinsburg, WV 25401  
Facility Description: Asphalt Processing and Storage Facility  
SIC Codes: 2951  
UTM Coordinates: 757.58 km Easting • 4366.22 km Northing • Zone 17  
Permit Type: Construction  
Description of Change: Construction of an asphalt processing and storage facility.

*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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*This permit does not affect 45CSR30 applicability, the source is a nonmajor source subject to 45CSR30.*

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*Unless otherwise stated WVDEP DAQ did not determine whether the permittee is subject to an area source air toxics standard requiring Generally Achievable Control Technology (GACT) promulgated after January 1, 2007 pursuant to 40 CFR 63, including the area source air toxics provisions of 40 CFR 63, Subpart AAAAAAA and 40 CFR 63, Subpart ZZZZ.*

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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>
1S	1E/2E	Four (4) Raw Material Storage Tanks and assoc. truck / railcar unloading to tanks	2010	2 tanks @ 390,000 gal 2 tanks @ 340,000 gal	1C/2C
2S	1E/2E	Two (2) Raw Material Blend / Recirculation Tanks	2010	119,000 gal each	1C/2C
3S	1E/2E	Four (4) Process Tanks	2010	Total for 4 Tanks, 220,000 tpy asphalt	1C/2C
4S	1E/2E	Three (3) Processed Asphalt Storage Tanks	2010	119,000 gal each	1C/2C
5S	1E/2E	Processed Asphalt Loading Rack	2010	54,000,000 gal/yr	1C/2C
6S	3E	Natural Gas Fired Hot Oil Heater	2010	9.9 MMBtu/hr	Low NO <sub>x</sub> technology
7S	4E	Natural Gas Fired Boiler	2010	9.9 MMBtu/hr	Low NO <sub>x</sub> technology
8S	1E/2E	Two (2) Modified Asphalt Mix Tanks	2010	3,000 gal each	1C/2C
9S	1E/2E	One (1) Modified Asphalt Storage Tank	2010	6,000 gal	1C/2C
10S	5E	Two (2) Used Motor Oil Storage Tanks	2010	119,000 gal each	NA
11S	1E/2E	Two (2) Product Tanks	2010	25,500 gal each	1C/2C
12S	6E	Emergency Generator	2010	100 kW	NA
13S	7E	Knockout Oil Accumulation Tank	2010	15,000 gal	NA
De Minimis		One (1) Modifier Storage Tank	2010	6,400 gal	NA
De Minimis		One (1) Oil Expansion Tank	2010	2,000 gal	NA
Fugitive		Additive Hopper	2010	NA	NA

**1.1. Control Devices**

<b>Control Device ID</b>	<b>Emission Point ID</b>	<b>Emission Unit ID Being Controlled</b>	<b>Control Device Description</b>	<b>Year Installed</b>	<b>Control Efficiency</b>
1C	1E	1S, 2S, 3S, 4S, 5S, 8S, 9S, 11S	Nacah Tech Direct Fired Thermal Oxidizer	2010	VOC – 98% HAP – 98%
2C	2E	1S, 2S, 3S, 4S, 5S, 8S, 9S, 11S	Nacah Tech Direct Fired Thermal Oxidizer	2010	VOC – 98% HAP – 98%
3C	8E	1S, 2S, 3S, 4S, 5S, 8S, 9S, 11S	Heil Process Equipment 730 Wet Scrubber	2010	PM – 99% HCl – 99% SO <sub>2</sub> – 99%
4C	9E	1S, 2S, 3S, 4S, 5S, 8S, 9S, 11S	Heil Process Equipment 730 Wet Scrubber	2010	PM – 99% HCl – 99% SO <sub>2</sub> – 99%

## 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 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 R13-2828, 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.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

[WV Code § 22-5-4(a)(15)]

### 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. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. 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 Enforcement and Permits Review  
(3AP12)  
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 45CSR30 – Operating Permit Program, the permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.
- 3.5.4.2. In accordance with 45CSR30 – Operating Permit Program, enclosed with this permit is a Certified Emissions Statement (CES) Invoice, from the date of initial startup through the following June 30. Said invoice and the appropriate fee shall be submitted to this office no later than 30 days prior to the date of initial startup. For any startup date other than July 1, the permittee shall pay a fee or prorated fee in accordance with Section 4.5 of 45CSR22. A copy of this schedule may be found attached to the Certified Emissions Statement (CES) Invoice.
- 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:
- a. The date, place as defined in this permit, and time of sampling or measurements;
  - b. The date(s) analyses were performed;
  - c. The company or entity that performed the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of the analyses; and
  - f. The operating conditions existing at the time of sampling or measurement.
- 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:
- 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.

**5.0. Source-Specific Requirements (Emission Point ID# 1E and 2E (DFTO1 and DFTO2) Normal Operating Scenario)**

**5.1. Limitations and Standards**

- 5.1.1. Emissions from emission sources 1S, 2S, 3S, 4S, 5S, 8S, 9S, and 11S shall be vented to and controlled by the Direct Fired Thermal Oxidizers (DFTO1 or DFTO2) prior to release to the atmosphere.
- 5.1.2. The Nacah Tech LLC Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) shall initially maintain a minimum residence time of 0.75 sec. and a minimum combustion chamber temperature of 1,400° F on a three (3) hour rolling average. The monitored compliance minimum residence time and combustion chamber temperature will be established during the initial compliance testing in accordance with 5.3.1. Thereafter, this permit shall be administratively updated to insert the compliance value for the monitored minimum combustion chamber temperature into this permit term.
- 5.1.3. The capture system pressure loss, as measured at the inlet to the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2), shall initially maintain a pressure gradient range of 0-1 mmHg with a maximum heat content of 15 BTU/scf and a maximum oxygen content of 15%. The monitored pressure gradient range will be established during the initial compliance testing in accordance with 5.3.2. Thereafter, this permit shall be administratively updated to insert the compliance value for the monitored pressure gradient range into this permit term.
- 5.1.4. The Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) shall be designed to achieve a minimum guaranteed overall control efficiency of 98% for VOC and HAP emissions.
- 5.1.5. Emissions from the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) shall not exceed the following limits:

Pollutant	Emission Point ID# 1E Maximum Hourly Emissions (lb/hr) <sup>1</sup>	Emission Point ID# 2E Maximum Hourly Emissions (lb/hr) <sup>1</sup>	Combined Emission Points ID# 1E/2E Maximum Annual Emissions (ton/year) <sup>2</sup>
Particulate Matter-10	17.50	17.50	55.00
Sulfur Dioxide	31.50	31.50	99.00
Carbon Monoxide	27.50	27.50	85.00
Nitrogen Oxides	2.10	2.10	6.60
Volatile Organic Compounds	3.50	3.50	9.70
Total HAPs	0.55	0.55	1.70

1. DFTO1 (Emission Point ID# 1E) and DFTO2 (Emission Point ID# 2E) can be utilized alone or together, as required by the air pollutant loading to the control devices.
2. The combined annual air pollutant emission rates from Emission Point ID# 1E/2E shall not exceed the Combined Emission Points ID# 1E and 2E Maximum Annual Emissions limits listed above, whether the permittee operates DFTO1 and DFTO2 alone, or both DFTO1 and DFTO2 at the same time.

Compliance with the annual emission limits shall be determined using rolling yearly totals. A rolling yearly total shall mean the sum of emissions at any given time for the previous twelve (12) consecutive months.

- 5.1.6. The maximum process throughput that can vent to each of the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) shall not exceed 34.7 tons/hour or 220,000 tons/year.
- 5.1.7. The maximum Modified Asphalt production shall not exceed 24 tons/hour or 4,940 tons/year.
- 5.1.8. No person shall cause, suffer, allow or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations.  
**[45CSR§10-4.1.]**
- 5.1.9. No person shall cause, suffer, allow or permit the combustion of any refinery process gas stream or any other process gas stream that contains hydrogen sulfide in a concentration greater than 50 grains per 100 cubic feet of gas except in the case of a person operating in compliance with an emission control and mitigation plan approved by the Director and U. S. EPA. In certain cases very small units may be considered exempt from this requirement if, in the opinion of the Director, compliance would be economically unreasonable and if the contribution of the unit to the surrounding air quality could be considered negligible.  
**[45CSR§10-5.1.]**
- 5.1.10. On and after the date on which §60.8(b) requires a performance test to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any blowing still:
  - a. Particulate matter in excess of 0.67 kg/Mg (1.3 lb/ton) of asphalt charged to the still when a catalyst is added to the still; and
  - b. Particulate matter in excess of 0.71 kg/Mg (1.4 lb/ton) of asphalt charged to the still when a catalyst is added to the still and when No. 6 fuel oil is fired in the afterburner; and
  - c. Particulate matter in excess of 0.60 kg/Mg (1.2 lb/ton) of asphalt charged to the still during blowing without a catalyst; and
  - d. Particulate matter in excess of 0.64 kg/Mg (1.3 lb/ton) of asphalt charged to the still during blowing without a catalyst and when No. 6 fuel oil is fired in the afterburner; and
  - e. Exhaust gases with an opacity greater than 0 percent unless an opacity limit for the blowing still when fuel oil is used to fire the afterburner has been established by the Administrator in accordance with the procedures in §60.474(g).

**[40CFR§60.472(b)]**

- 5.1.11. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any asphalt storage tank exhaust gases with opacity greater than 0 percent, except for one consecutive 15-minute period in any 24-hour period when the transfer lines are being blown for clearing. The control device shall not be bypassed during this 15-minute period. If, however, the emissions from any asphalt storage tank(s) are ducted to a control device for a saturator, the combined emissions shall meet the emission limit contained in paragraph (a) of this section during the time the saturator control device is operating. At any other time the asphalt storage tank(s) must meet the opacity limit specified above for storage tanks.  
[40CFR§60.472(c)]

## 5.2. Monitoring Requirements

- 5.2.1. The owner or operator of a manufacturing process source(s) shall submit, to the Secretary for approval, a monitoring plan for each manufacturing process source(s) that describes the method the owner or operator will use to monitor compliance with the applicable emission standard set forth in section 4 of 45CSR10. The owner or operator of a manufacturing process source(s) may use CEMS, which shall be deemed to satisfy all of the requirements of an approved monitoring plan, or a monitoring plan as specified in subsection 6.4, in accordance with the provisions of this section.  
[45CSR§10A-6.2.a]
- 5.2.2. The owner or operator subject to the provisions of this subpart and using an afterburner to meet the emission limit in §60.472(a)(1) and/or (b)(1) shall continuously monitor and record the temperature in the combustion zone of the afterburner. The monitoring instrument shall have an accuracy of  $\pm 10$  °C ( $\pm 18$  °F) over its range.  
[40CFR§60.473(b)]

## 5.3. Testing Requirements

- 5.3.1. For the purposes of establishing a different minimum combustion chamber temperature for the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2), the permittee shall conduct performance testing to establish the compliance value for the monitored minimum combustion chamber temperature of the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2). This initial compliance test shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, and within 180 days of start-up, whichever is later.
- 5.3.2. For the purposes of establishing a different capture system pressure loss, as measured at the inlet to the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2), the permittee shall conduct performance testing to establish the compliance value for the monitored capture system pressure loss of the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2). This initial compliance test shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, and within 180 days of start-up, whichever is later.
- 5.3.3. For the purposes of determining compliance with Section 5.1.4, the permittee shall conduct performance testing to show compliance with the destruction efficiency of the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) is at or greater than 98% for total organic compounds. This initial compliance test shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, and within 180 days of start-up, whichever is later.

5.3.4. The owner or operator shall conduct or have conducted compliance tests to determine the compliance of each manufacturing process source with the emission standards set forth in section 4 of 45CSR10. Compliance tests shall be conducted in accordance with 40 CFR Part 60, Appendix A, Method 6 or other equivalent EPA testing method approved by the Secretary. The initial compliance test shall be conducted within a time period starting March 15, 2000, and ending March 15, 2002, for existing units and within one hundred eighty (180) days of start-up for new unit(s). The results of the initial test shall be a consideration in establishing a compliance testing frequency. Compliance tests shall be conducted at a frequency established in the approved monitoring plan.

**[45CSR§10A-5.2.a]**

5.3.5. In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

**[40CFR§60.474(b)]**

5.3.6. The owner or operator shall determine compliance with the particulate matter standards in §60.472 as follows:

a. The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E=(c_s Q_{sd})/(PK)$$

where:

E=emission rate of particulate matter, kg/Mg (lb/ton).

$c_s$ =concentration of particulate matter, g/dscm (gr/dscf).

$Q_{sd}$ =volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

P=asphalt roofing production rate or asphalt charging rate, Mg/hr (ton/hr).

K=conversion factor, 1000 g/kg [7000 (gr/lb)].

b. Method 5A shall be used to determine the particulate matter concentration ( $c_s$ ) and volumetric flow rate ( $Q_{sd}$ ) of the effluent gas. For a saturator, the sampling time and sample volume for each run shall be at least 120 minutes and 3.00 dscm (106 dscf), and for the blowing still, at least 90 minutes or the duration of the coating blow or non-coating blow, whichever is greater, and 2.25 dscm (79.4 dscf).

c. For the blowing still, the asphalt charging rate (P) shall be computed for each run using the following equation:

$$P=(Vd)/(K' \Theta)$$

where:

P=asphalt charging rate to blowing still, Mg/hr (ton/hr).

V=volume of asphalt charged,  $m^3$  ( $ft^3$ ).

d=density of asphalt,  $kg/m^3$  ( $lb/ft^3$ ).

K'=conversion factor, 1000 kg/Mg (2000 lb/ton).

$\Theta$ =duration of test run, hr.

- (i) The volume (V) of asphalt charged shall be measured by any means accurate to within 10 percent.
- (ii) The density (d) of the asphalt shall be computed using the following equation:

$$d = K_1 - K_2 T_i$$

Where:

d = Density of the asphalt, kg/m<sup>3</sup> (lb/ft<sup>3</sup> )

K<sub>1</sub>= 1056.1 kg/m<sup>3</sup> (metric units)

= 64.70 lb/ft<sup>3</sup> (English Units)

K<sub>2</sub>= 0.6176 kg/(m<sup>3</sup> °C) (metric units)

= 0.0694 lb/(ft<sup>3</sup> °F) (English Units)

T<sub>i</sub>= temperature at the start of the blow, °C ( °F)

- d. Method 9 and the procedures in §60.11 shall be used to determine opacity.

**[40CFR§60.474(c)]**

- 5.3.7. The Administrator will determine compliance with the standards in §60.472(a)(3) by using Method 22, modified so that readings are recorded every 15 seconds for a period of consecutive observations during representative conditions (in accordance with §60.8(c)) totaling 60 minutes. A performance test shall consist of one run.

**[40CFR§60.474(d)]**

- 5.3.8. The owner or operator shall use the monitoring device in §60.473 (a) or (b) to monitor and record continuously the temperature during the particulate matter run and shall report the results to the Administrator with the performance test results.

**[40CFR§60.474(e)]**

- 5.3.9. If at a later date the owner or operator believes that the emission limits in §60.472(a) and (b) are being met even though one of the conditions listed in this paragraph exist, he may submit a written request to the Administrator to repeat the performance test and procedure outlined in paragraph (c) of this section.

- a. The temperature measured in accordance with §60.473(a) is exceeding that measured during the performance test.

- b. The temperature measured in accordance with §60.473(b) is lower than that measured during the performance test.

**[40CFR§60.474(f)]**

#### 5.4. Recordkeeping Requirements

- 5.4.1. To demonstrate compliance with section 5.1.6, the permittee shall maintain daily records of the process throughput to each of the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2). 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.

- 5.4.2. To demonstrate compliance with section 5.1.7, the permittee shall maintain daily records of Modified Asphalt production. 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. For the purpose of demonstrating compliance with sections 5.1.2 and 5.1.3, the permittee shall maintain a record of the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) design evaluation. The design evaluation shall include, but not limited to, net heat value calculations, residence time calculations, and all supporting concentration calculations.
- 5.4.4. In order to demonstrate compliance with the temperature requirements of 5.1.2 the permittee shall monitor and record the combustion chamber temperature in four equally spaced periods per each hour the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) are operated. 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.
- 5.4.5. The permittee shall maintain a copy of all test report(s) as conducted in 5.3.2 and all calculation(s) used to establish a new operating temperature for the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) in accordance with 3.4.1 with the exception to the retain of such records. Thus, such records shall be retained in accordance with 3.4.1 or until a new temperature is established in accordance with 5.3.2 whichever is later.
- 5.4.6. All records required under Section 5.4 shall be maintained on site 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. Any deviation(s) from the thermal oxidizer design and/or operation criteria in Sections 5.1.2, 5.1.3, and 5.1.4 shall be reported in writing to the Director as soon as practicable, but within ten (10) calendar days.
- 5.5.2. The permittee shall submit a written report of the results of testing required in 5.3 of this permit before the close of business on the 60th day following the completion of such testing to the Director. Such report(s) shall include all records of the opacity observations or temperatures readings taken during such testing, whichever is appropriate for the required report.
- 5.5.3. The industry is exempted from the quarterly reports required under §60.7(c). The owner/operator is required to record and report the operating temperature of the control device during the performance test and, as required by §60.7(d), maintain a file of the temperature monitoring results for at least two years.  
**[40CFR§60.473(d)]**

## **6.0. Source-Specific Requirements (Emission Point ID# 8E and 9E (DFTO#1/Scrubber #1 and DFTO#2/Scrubber #2), Alternate Operating Scenario)**

The desired properties of the final product can be changed by altering the blend of raw materials. The alternate scenario incorporates the use of a catalyst or “alternative Modifier” which will be blended into the mixture of raw materials going to the process tanks. As with normal operations, the alternate scenario will operate in a batch mode. The alternative Modifier will reduce residence time in the process tanks, requiring less energy expenditure to produce the processed asphalt and reducing emissions of criteria pollutants from the process on a lb/ton basis. Under this alternative scenario, gases from each DFTO will be vented to a quenching system of water sprays, and then to a wet scrubber (one scrubber per DFTO stack). Based on manufacturer’s specifications, the scrubbers will provide 99% control efficiency for emissions of HCl, PM, and SO<sub>2</sub>. The scrubbers will be packed bed units with polypropylene packing and entrainment separators employing a scrubbing liquor of water and sodium hydroxide (NaOH).

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

- 6.1.1. The alternate scenario described in Section 6.0 shall not operate at the same time as the normal operating scenario which is described in Section 5.0. The permittee shall notify the Secretary, in writing, no later than ten (10) calendar days if the permittee changes from the normal operating scenario to the alternate operating scenario or from the alternate operating scenario to the normal operating scenario.
- 6.1.2. Emissions from emission sources 1S, 2S, 3S, 4S, 5S, 8S, 9S, and 11S shall be vented to and controlled by the Direct Fired Thermal Oxidizers (DFTO1 or DFTO2). The emissions from each of the Direct Fired Thermal Oxidizers (DFTO1 or DFTO2) shall be vented to a quenching system of water sprays, and then to a wet scrubber, Heil Process Equipment 730 (3C/4C) (one scrubber per DFTO stack) prior to release to the atmosphere.
- 6.1.3. The Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) shall initially maintain a minimum residence time of 0.75 sec. and a minimum combustion chamber temperature of 1,400° F on a three (3) hour rolling average. The monitored compliance minimum residence time and combustion chamber temperature will be established during the initial compliance testing in accordance with 5.3.2. Thereafter, this permit shall be administratively updated to insert the compliance value for the monitored minimum combustion chamber temperature into this permit term.
- 6.1.4. The capture system pressure loss, as measured at the inlet to the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2), shall initially maintain a pressure gradient range of 0-1 mmHg with a maximum heat content of 15 BTU/scf and a maximum oxygen content of 15%. The monitored pressure gradient range will be established during the initial compliance testing in accordance with 5.3.2. Thereafter, this permit shall be administratively updated to insert the compliance value for the monitored pressure gradient range into this permit term.
- 6.1.5. The pressure drop through the wet scrubbers, Heil Process Equipment 730 (3C/4C), shall maintain a pressure drop through the scrubber of 4.75 inches of H<sub>2</sub>O.
- 6.1.6. The wet scrubbers, Heil Process Equipment 730 (3C/4C), shall be designed to achieve a minimum guaranteed overall control efficiency of 99% control efficiency for emissions of HCl, PM, and SO<sub>2</sub>.

- 6.1.7. Emissions from the wet scrubbers, Heil Process Equipment 730 (3C/4C), shall not exceed the following limits:

Pollutant	Emission Point ID# 8E Maximum Hourly Emissions (lb/hr) <sup>1</sup>	Emission Point ID# 9E Maximum Hourly Emissions (lb/hr) <sup>1</sup>	Combined Emission Points ID# 8E/9E Maximum Annual Emissions (ton/year) <sup>2</sup>
Particulate Matter-10	0.17	0.17	0.60
Sulfur Dioxide	0.16	0.16	0.50
Carbon Monoxide	27.50	27.50	85.00
Nitrogen Oxides	2.10	2.10	6.60
Volatile Organic Compounds	3.50	3.50	9.70
Total HAPs	0.40	0.40	1.40

1. DFTO1/Scrubber #1 (Emission Point ID# 8E) and DFTO2/Scrubber #2 (Emission Point ID# 9E) can be utilized alone or together, as required by the air pollutant loading to the control devices.
2. The combined annual air pollutant emission rates from Emission Point ID# 1E/2E shall not exceed the Combined Emission Points ID# 1E and 2E Maximum Annual Emissions limits listed above, whether the permittee operates DFTO1 and DFTO2 alone, or both DFTO1 and DFTO2 at the same time.

Compliance with the annual emission limits shall be determined using rolling yearly totals. A rolling yearly total shall mean the sum of emissions at any given time for the previous twelve (12) consecutive months.

- 6.1.8. The maximum process throughput that can vent to each of the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) shall not exceed 34.7 tons/hour or 220,000 tons/year.
- 6.1.9. The maximum Modified Asphalt production shall not exceed 24 tons/hour or 4,940 tons/year.
- 6.1.10. No person shall cause, suffer, allow or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations.  
**[45CSR§10-4.1.]**

- 6.1.11. No person shall cause, suffer, allow or permit the combustion of any refinery process gas stream or any other process gas stream that contains hydrogen sulfide in a concentration greater than 50 grains per 100 cubic feet of gas except in the case of a person operating in compliance with an emission control and mitigation plan approved by the Director and U. S. EPA. In certain cases very small units may be considered exempt from this requirement if, in the opinion of the Director, compliance would be economically unreasonable and if the contribution of the unit to the surrounding air quality could be considered negligible.  
**[45CSR§10-5.1.]**
- 6.1.12. On and after the date on which §60.8(b) requires a performance test to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any blowing still:
- a. Particulate matter in excess of 0.67 kg/Mg (1.3 lb/ton) of asphalt charged to the still when a catalyst is added to the still; and
  - b. Particulate matter in excess of 0.71 kg/Mg (1.4 lb/ton) of asphalt charged to the still when a catalyst is added to the still and when No. 6 fuel oil is fired in the afterburner; and
  - c. Particulate matter in excess of 0.60 kg/Mg (1.2 lb/ton) of asphalt charged to the still during blowing without a catalyst; and
  - d. Particulate matter in excess of 0.64 kg/Mg (1.3 lb/ton) of asphalt charged to the still during blowing without a catalyst and when No. 6 fuel oil is fired in the afterburner; and
  - e. Exhaust gases with an opacity greater than 0 percent unless an opacity limit for the blowing still when fuel oil is used to fire the afterburner has been established by the Administrator in accordance with the procedures in §60.474(g).
- [40CFR§60.472(b)]**
- 6.1.13. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any asphalt storage tank exhaust gases with opacity greater than 0 percent, except for one consecutive 15-minute period in any 24-hour period when the transfer lines are being blown for clearing. The control device shall not be bypassed during this 15-minute period. If, however, the emissions from any asphalt storage tank(s) are ducted to a control device for a saturator, the combined emissions shall meet the emission limit contained in paragraph (a) of this section during the time the saturator control device is operating. At any other time the asphalt storage tank(s) must meet the opacity limit specified above for storage tanks.  
**[40CFR§60.472(c)]**

## **6.2. Monitoring Requirements**

- 6.2.1. The owner or operator of a manufacturing process source(s) shall submit, to the Secretary for approval, a monitoring plan for each manufacturing process source(s) that describes the method the owner or operator will use to monitor compliance with the applicable emission standard set forth in section 4 of 45CSR10. The owner or operator of a manufacturing process source(s) may use CEMS, which shall be deemed to satisfy all of the requirements of an approved monitoring plan, or a monitoring plan as specified in subsection 6.4, in accordance with the provisions of this section.  
**[45CSR§10A-6.2.a]**

- 6.2.2. The owner or operator subject to the provisions of this subpart and using an afterburner to meet the emission limit in §60.472(a)(1) and/or (b)(1) shall continuously monitor and record the temperature in the combustion zone of the afterburner. The monitoring instrument shall have an accuracy of  $\pm 10$  °C ( $\pm 18$  °F) over its range.  
**[40CFR§60.473(b)]**

### 6.3. Testing Requirements

- 6.3.1. For the purposes of establishing a different minimum combustion chamber temperature for the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2), the permittee shall conduct performance testing to establish the compliance value for the monitored minimum combustion chamber temperature of the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2). This initial compliance test shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, and within 180 days of start-up, whichever is later.
- 6.3.2. For the purposes of establishing a different capture system pressure loss, as measured at the inlet to the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2), the permittee shall conduct performance testing to establish the compliance value for the monitored capture system pressure loss of the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2). This initial compliance test shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, and within 180 days of start-up, whichever is later.
- 6.3.3. For the purposes of determining compliance with Section 6.1.6, the permittee shall conduct performance testing to show compliance with the destruction efficiency of the wet scrubbers, Heil Process Equipment 730 (3C/4C), is at or greater than 99% control efficiency for emissions of HCl, PM, and SO<sub>2</sub>. This initial compliance test shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, and within 180 days of start-up, whichever is later.
- 6.3.4. The owner or operator shall conduct or have conducted, compliance tests to determine the compliance of each manufacturing process source with the emission standards set forth in section 4 of 45CSR10. Compliance tests shall be conducted in accordance with 40 CFR Part 60, Appendix A, Method 6 or other equivalent EPA testing method approved by the Secretary. The initial compliance test shall be conducted within a time period starting March 15, 2000, and ending March 15, 2002, for existing units and within one hundred eighty (180) days of start-up for new unit(s). The results of the initial test shall be a consideration in establishing a compliance testing frequency. Compliance tests shall be conducted at a frequency established in the approved monitoring plan.  
**[45CSR§10A-5.2.a]**
- 6.3.5. In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).  
**[40CFR§60.474(b)]**
- 6.3.6. The owner or operator shall determine compliance with the particulate matter standards in §60.472 as follows:

- a. The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E=(c_s Q_{sd})/(PK)$$

where:

E=emission rate of particulate matter, kg/Mg (lb/ton).

$c_s$ =concentration of particulate matter, g/dscm (gr/dscf).

$Q_{sd}$ =volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

P=asphalt roofing production rate or asphalt charging rate, Mg/hr (ton/hr).

K=conversion factor, 1000 g/kg [7000 (gr/lb)].

- b. Method 5A shall be used to determine the particulate matter concentration ( $c_s$ ) and volumetric flow rate ( $Q_{sd}$ ) of the effluent gas. For a saturator, the sampling time and sample volume for each run shall be at least 120 minutes and 3.00 dscm (106 dscf), and for the blowing still, at least 90 minutes or the duration of the coating blow or non-coating blow, whichever is greater, and 2.25 dscm (79.4 dscf).
- c. For the blowing still, the asphalt charging rate (P) shall be computed for each run using the following equation:

$$P=(Vd)/(K' \Theta)$$

where:

P=asphalt charging rate to blowing still, Mg/hr (ton/hr).

V=volume of asphalt charged,  $m^3$  ( $ft^3$ ).

d=density of asphalt,  $kg/m^3$  ( $lb/ft^3$ ).

K'=conversion factor, 1000 kg/Mg (2000 lb/ton).

$\Theta$ =duration of test run, hr.

- (i) The volume (V) of asphalt charged shall be measured by any means accurate to within 10 percent.
- (ii) The density (d) of the asphalt shall be computed using the following equation:

$$d = K_1 - K_2 T_i$$

Where:

d = Density of the asphalt,  $kg/m^3$  ( $lb/ft^3$ )

$K_1$ = 1056.1  $kg/m^3$  (metric units)

= 64.70  $lb/ft^3$  (English Units)

$K_2$ = 0.6176  $kg/(m^3 \text{ } ^\circ C)$  (metric units)

= 0.0694  $lb/(ft^3 \text{ } ^\circ F)$  (English Units)

$T_i$ = temperature at the start of the blow,  $^\circ C$  (  $^\circ F$ )

- d. Method 9 and the procedures in §60.11 shall be used to determine opacity.

**[40CFR§60.474(c)]**

- 6.3.7. The Administrator will determine compliance with the standards in §60.472(a)(3) by using Method 22, modified so that readings are recorded every 15 seconds for a period of consecutive observations during representative conditions (in accordance with §60.8(c)) totaling 60 minutes. A performance test shall consist of one run.  
**[40CFR§60.474(d)]**
- 6.3.8. The owner or operator shall use the monitoring device in §60.473 (a) or (b) to monitor and record continuously the temperature during the particulate matter run and shall report the results to the Administrator with the performance test results.  
**[40CFR§60.474(e)]**
- 6.3.9. If at a later date the owner or operator believes that the emission limits in §60.472(a) and (b) are being met even though one of the conditions listed in this paragraph exist, he may submit a written request to the Administrator to repeat the performance test and procedure outlined in paragraph (c) of this section.
- a. The temperature measured in accordance with §60.473(a) is exceeding that measured during the performance test.
  - b. The temperature measured in accordance with §60.473(b) is lower than that measured during the performance test.
- [40CFR§60.474(f)]**

#### **6.4. Recordkeeping Requirements**

- 6.4.1. To demonstrate compliance with section 6.1.8, the permittee shall maintain daily records of the process throughput to each of the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2). 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.
- 6.4.2. To demonstrate compliance with section 6.1.9, the permittee shall maintain daily records of Modified Asphalt production. 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.
- 6.4.3. For the purpose of demonstrating compliance with sections 6.1.3 and 6.1.4, the permittee shall maintain a record of the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) design evaluation. The design evaluation shall include, but not limited to, net heat value calculations, residence time calculations, and all supporting concentration calculations.
- 6.4.4. In order to demonstrate compliance with the temperature requirements of 6.1.3 the permittee shall monitor and record the combustion chamber temperature in four equally spaced periods per each hour the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) are operated. 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.

- 6.4.5. The permittee shall maintain a copy of all test report(s) as conducted in 6.3.2 and all calculation(s) used to establish a new operating temperature for the Direct Fired Thermal Oxidizers (DFTO1 and DFTO2) in accordance with 3.4.1 with the exception to the retain of such records. Thus, such records shall be retained in accordance with 3.4.1 or until a new temperature is established in accordance with 5.3.2 whichever is later.
- 6.4.6. All records required under Section 6.4 shall be maintained on site 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.

### **6.5. Reporting Requirements**

- 6.5.1. Any deviation(s) from the thermal oxidizer/wet scrubber design and/or operation criteria in Sections 6.1 shall be reported in writing to the Director as soon as practicable, but within ten (10) calendar days.
- 6.5.2. The permittee shall submit a written report of the results of testing required in 6.3 of this permit before the close of business on the 60th day following the completion of such testing to the Director. Such report(s) shall include all records of the opacity observations or temperatures readings taken during such testing, whichever is appropriate for the required report.
- 6.5.3. The industry is exempted from the quarterly reports required under §60.7(c). The owner/operator is required to record and report the operating temperature of the control device during the performance test and, as required by §60.7(d), maintain a file of the temperature monitoring results for at least two years.

**[40CFR§60.473(d)]**

## 7.0. Source-Specific Requirements (Emission Point ID# 3E (Hot Oil Heater))

### 7.1. Limitations and Standards

- 7.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit (American Heating AHE-800, Hot Oil Heater, Emission Unit ID# 6S) which is greater than ten (10) percent opacity based on a six minute block average.  
[45CSR§2-3.1.]
- 7.1.2. Compliance with the visible emission requirements of 45CSR§2-3.1 shall be determined in accordance with 40 C.F.R. 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 45CSR§2-3.1. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.  
[45CSR§2-3.2.]
- 7.1.3. Maximum Design Heat Input. The maximum design heat input for the American Heating AHE-800, Hot Oil Heater, Emission Unit ID# 6S shall not exceed 9.9 MMBtu/hr.
- 7.1.4. Maximum emissions from the American Heating AHE-800, Hot Oil Heater, Emission Unit ID# 6S shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.49	2.10
Carbon Monoxide	0.82	3.60

### 7.2. Monitoring Requirements

- 7.2.1. 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 7.1.1. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

## 8.0. Source-Specific Requirements (Emission Point ID# 4E (Natural Gas Fired Boiler))

### 8.1. Limitations and Standards

- 8.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.  
[45CSR§2-3.1.]
- 8.1.2. Compliance with the visible emission requirements of 45CSR§2-3.1 shall be determined in accordance with 40 C.F.R. 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 45CSR§2-3.1. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.  
[45CSR§2-3.2.]
- 8.1.3. Maximum Design Heat Input. The maximum design heat input for the Superior Mohawk, Natural Gas Fired Boiler, Emission Unit ID# 7S shall not exceed 9.9 MMBtu/hr.
- 8.1.4. Maximum emissions from each of the 9.9 MMBtu/hr Superior Mohawk, Natural Gas Fired Boiler, Emission Unit ID# 7S shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.49	2.10
Carbon Monoxide	0.82	3.60

### 8.2. Monitoring Requirements

- 8.2.1. 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 8.1.1. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

## 9.0. Source-Specific Requirements (Tanks)

### 9.1. Limitations and Standards

- 9.1.1. Maximum Tank Throughput Limitation. The maximum tank throughput for the following tanks shall not exceed the annual tank throughput without effecting a modification or administrative update. Compliance with the Maximum Yearly Tank 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.

Emission Unit ID	Emission Unit Description	Annual Tank Throughput
1S	Four (4) Raw Material Storage Tanks	52,700,000 gal/yr (combined for 4 tanks)
2S	Two (2) Raw Material Blend/Recirculation Tanks	52,700,000 gal/yr (combined for 2 tanks)
3S	Four (4) Process Tanks	52,700,000 gal/yr (combined for 4 tanks)
4S	Three (3) Processed Asphalt Storage Tanks	52,700,000 gal/yr (combined for 3 tanks)
10S	Two (2) Used Motor Oil Storage Tanks	5,270,000 gal/yr (combined for 2 tanks)
11S	Two (2) Product Tanks	355,200 gal/yr for 2 tanks

- 9.1.2. The permitted facility shall comply with all applicable provisions of 40CFR60 Subpart Kb for Emission Unit ID# 2S (Two (2) Raw Material Blend/Recirculation Tanks) and 4S (Three (3) Processed Asphalt Storage Tanks), provided that compliance with any more stringent limitation set forth under this permit shall also be demonstrated. Recordkeeping and reporting requirements shall be conducted in accordance with §60.635 and §60.636. These reports shall be submitted in accordance with the time lines and in the order set forth in §60.636 and submitted to the following addresses listed in Section 3.5.3.

### 9.2. Recordkeeping Requirements

- 9.2.1. The permittee shall maintain a record of the tank throughput for all tanks listed in 9.1.1 with maximum throughput limits. 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 (Processed Asphalt Loading Racks (5S))

### 10.1. Limitations and Standards

- 10.1.1. **Maximum Throughput Limitation.** The maximum liquid processed asphalt throughput for the Processed Asphalt Loading Rack (5S) shall not exceed 54,000,000 gal/yr. Compliance with the Maximum Throughput Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
- 10.1.2. The Natural Gas Liquid Loading Racks (009-01, 009-02) shall be operated in accordance with the plans and specifications filed in Permit Application R13-2828.

### 10.2. Recordkeeping Requirements

- 10.2.1. To demonstrate compliance with section 10.1.1 the permittee shall maintain records of the total amount of processed asphalt loaded by the Processed Asphalt Loading Rack (5S). Said records required 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.

## 11.0. Source-Specific Requirements (Emission Point ID# 6E (Emergency Generator))

### 11.1. Limitations and Standards

- 11.1.1. The quantity of natural gas that shall be consumed in the 155 hp emergency natural gas fired reciprocating engine, Emission Unit ID#12S, shall not exceed 1,260 cubic feet per hour or  $0.63 \times 10^6$  cubic feet per year.
- 11.1.2. Maximum emissions from the 155 hp emergency natural gas fired reciprocating engine, Emission Unit ID#12S, shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	0.04	0.01
Carbon Monoxide	0.74	0.18
Volatile Organic Compounds	0.04	0.01

- 11.1.3. **Maximum Yearly Operation Limitation.** The maximum yearly hours of operation for the 155 hp emergency natural gas fired reciprocating engine, Emission Unit ID#12S, shall not exceed 500 hours per year. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve month rolling total. 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.
- 11.1.4. To demonstrate compliance with section 11.1.1, the permittee shall maintain records of the amount of natural gas consumed in the 155 hp emergency natural gas fired reciprocating engine, Emission Unit ID#12S, 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.

- 11.1.5. 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:
    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)]
- 11.1.6. 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)]

## **11.2. Emission Standards for Owners and Operators**

- 11.2.1. 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)]
- 11.2.2. Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section. [40CFR§60.4233(h)]
- 11.2.3. 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]

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

- 11.3.1. 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)]
- 11.3.2. For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011. [40CFR§60.4236(c)]

- 11.3.3. Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter. [40CFR§60.4237(b)]

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

- 11.4.1. If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in §60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.

- a. If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator.
- b. If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.
  1. If you are an owner or operator of a stationary SI internal combustion engine less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required if you are an owner or operator.
  2. If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 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 within 1 year of engine startup to demonstrate compliance.
  3. 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 within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

[40CFR§60.4243(a)]

- 11.4.2. 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)]
- 11.4.3. If you are an owner or operator of a stationary SI internal combustion engine that must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according paragraph (b)(2)(i) or (ii) of this section, except that if you comply according to paragraph (b)(2)(i) of this section, you demonstrate that your non-certified engine complies with the emission standards specified in §60.4233(f). [40CFR§60.4243(c)]
- 11.4.4. Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. 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 ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving 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. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited. [40CFR§60.4243(d)]
- 11.4.5. 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)]
- 11.4.6. If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a). [40CFR§60.4243(f)]

- 11.4.7. 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)]

## 11.5. Testing Requirements for Owners and Operators

- 11.5.1. 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.

$$RF_i = \frac{C}{C_{Ai}} \quad (\text{Eq. 4})$$

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.

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

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)]

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

11.6.1. 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 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)]

### 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.