



**TITLE V FEDERAL OPERATING PERMIT  
AND  
SMAQMD RULE 201 PERMITS TO OPERATE**

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**TITLE V PERMIT NO:  
TV2006-01-02**

**PERMIT  
ISSUED:**  
October 22, 2007

**PERMIT  
LAST AMENDED:**  
July 09, 2009

**PERMIT  
EXPIRES:**  
October 22, 2012

**PERMIT ISSUED TO:**  
Grafil, Inc.  
5900 88th Street  
Sacramento, CA 95828

**FACILITY LOCATION:**  
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**NATURE OF BUSINESS:**  
Carbon Fiber Manufacturing

**STANDARD INDUSTRIAL  
CLASSIFICATION (SIC):**  
2824 (NAICS 32522)

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## I. PERMIT SUMMARY

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This permit shall serve as a Permit to Operate pursuant to SMAQMD Rule 201 (General Permit Requirements) and SMAQMD Rule 207 (Title V - Federal Operating Permit Program). Requirements identified in the permit as non-federally enforceable are not enforceable by U.S. EPA. However, they are enforceable by the SMAQMD.

The permittee's application for this air quality Permit to Operate was evaluated for compliance with SMAQMD, State of California and Federal air quality rules and regulations. The following listed rules are those that were found to be applicable at the time of permit review, based on the information submitted with the Title V permit application.

Citation	Description	Rule Adoption Date	Federally Enforceable ?
SMAQMD Rule 101	General Provisions and Definitions	09-03-1998	Yes
SMAQMD Rule 102	Circumvention	05-15-1972	Yes
SMAQMD Rule 201	General Permit Requirements (SIP approved)	11-20-1984	Yes
SMAQMD Rule 201	General Permit Requirements (not SIP approved)	08-24-2006	No
SMAQMD Rule 202	New Source Review (SIP approved)	11-20-1984	Yes
SMAQMD Rule 202	New Source Review (not SIP approved)	02-24-2005	No
SMAQMD Rule 207	Title V - Federal Operating Permit Program (not SIP approved but rule is applicable as part of U.S. EPA approval of the SMAQMD Title V program)	04-26-2001	Yes
SMAQMD Rule 301	Permit Fees - Stationary Source (not SIP approved but Title V fees in rule applicable as part of U.S. EPA approval of the SMAQMD Title V program)	08-01-2008	Yes (Title V fee provisions only)
SMAQMD Rule 306	Air Toxics Fees	03-27-2003	No
SMAQMD Rule 307	Clean Air Act Fees	09-26-2002	Yes
SMAQMD Rule 401	Ringelmann Chart	04-19-1983	Yes

### I. PERMIT SUMMARY

Citation	Description	Rule Adoption Date	Federally Enforceable ?
SMAQMD Rule 402	Nuisance	08-03-1977	No
SMAQMD Rule 403	Fugitive Dust	11-29-1983	Yes
SMAQMD Rule 404	Particulate Matter	11-20-1984	Yes
SMAQMD Rule 406	Specific Contaminants	11-29-1983	Yes
SMAQMD Rule 411	NOx from Boilers, Process Heaters and Steam Generators (SIP approved)	10-27-2005	Yes
SMAQMD Rule 411	NOx from Boilers, Process Heaters and Steam Generators (not SIP approved)	08-23-2007	No
SMAQMD Rule 412	Stationary Internal Combustion Engines Located at Major Stationary Sources of NOx	06-01-1995	Yes
SMAQMD Rule 414	Natural Gas Fired Water Heaters	08-01-1996	Yes
SMAQMD Rule 420	Sulfur Content of Fuels	11-29-1983	Yes
SMAQMD Rule 442	Architectural Coatings (SIP approved)	09-05-1996	Yes
SMAQMD Rule 442	Architectural Coatings (not SIP approved)	05-24-2001	No
SMAQMD Rule 602	Breakdown Conditions: Emergency Variance	12-06-1978	No
CARB ATCM	Title 17, California Code of Regulations, Section 93115 - Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines	10-18-2007 (A)	No

### I. PERMIT SUMMARY

Citation	Description	Rule Adoption Date	Federally Enforceable ?
U.S. EPA New Source Performance Standards (NSPS)	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. [40 CFR 60 Subpart IIII (begin at 60.4200)]	07-11-2006 (B)	Yes
U.S. EPA National Emission Standard for Hazardous Air Pollutants (NESHAP)	National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR 63 Subpart ZZZZ (begin at 63.6580)]	01-18-2008 (B)	Yes
40 CFR 68	Chemical Accident Prevention Provisions [40 CFR 68 (begin at 68.1)]	04-09-2004 (B)	Yes (if threshold quantity is exceeded)
40 CFR 82	Protection of Stratospheric Ozone - Recycling and Emissions Reduction [40 CFR 82 (begin at 82.150)]	04-13-2005 (B)	Yes

- (A) Date last amended by CARB.
- (B) Date promulgated/amened by U.S. EPA.

Future changes in prohibitory rules may establish more stringent requirements that may, at the SMAQMD level, supersede the conditions listed here. For Title V purposes however, the federally enforceable requirements are those found in the Title V permit. Federally enforceable provisions of the Title V permit do not change until the Title V permit is revised.

## II. FACILITY DESCRIPTION

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### Permitting Background

The following permit actions have occurred since the initial Title V Federal Operating Permit No. TV1996-01-01 was issued:

<u>Permit Action</u>	<u>Date</u>	<u>Title V Permit No.</u>
Initial Title V Federal Operating Permit issued	10-29-1997	TV1996-01-01
1st Minor Modification	04-15-1998	TV1996-01-02
1st Permit Renewal (includes Minor Modification)	10-22-2002	TV2002-01-01
1st Minor Modification	04-04-2006	TV2002-01-02
2nd Permit Renewal	10-22-2007	TV2006-01-01

### Current Permitting Action

This 1st Significant Modification to the 2nd Permit Renewal will be assigned the following permit number: TV2006-01-02.

### Facility Description

*The following facility description is for informational purposes only and does not contain any applicable federally enforceable requirements.*

Grafil, Inc. manufactures carbon fibers at its facility in Sacramento, California. The carbon fiber is used by their customers to manufacture finished products such as sporting goods, satellites, helicopter rotor blades, drive shafts, pumps, valves and CNG tanks.

Grafil, Inc. manufactures the carbon fiber from polyacrylic fiber raw material. The carbon fiber is processed in two parallel production lines, designated as Line 31 and Line 32. The two production lines operate independently of each other. The carbon fiber produced from these lines receives a surface treatment by a water based nylon coating in a third processing line.

High quality continuous polyacrylic fibers wound on spools are received and stored in the precursor warehouse. During processing spools are transferred from the storage area and batch loaded to the feed end of each production line. Fiber is unwound from many spools simultaneously and processed through a sequence of production steps in Lines 31 and 32. These production steps include, in order:

- a. Surface oxidation in atmospheric ovens.
- b. Tar removal in low temperature furnaces.
- c. Carbonization in high temperature furnaces.

## II. FACILITY DESCRIPTION

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- d. Surface treatment of the fibers with a solution that promotes good adhesion with polymer matrix systems, a necessary requirement for some end users.

Total processing time through each line is dependent on package length, fiber speed and customer product requirements. Processing operations occur semi-continuously, 24 hours per day, 7 days per week and 52 weeks per year.

There are four thermal oxidizers and two baghouses associated with the carbon fiber processing lines that are used to control the emission of reactive organic compounds, particulate matter and toxic pollutants.

In addition to the carbon fiber processing lines the facility has the following support equipment:

- a. Two natural gas fired boilers.
- b. One propane fueled emergency use IC engine to drive an electrical generator when utility electricity becomes unavailable.
- c. One diesel fueled emergency use IC engine to drive a fire pump for firefighting purposes.

### III. FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL

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#### TITLE V PERMIT MODIFICATIONS AND RENEWAL

1. The owner or operator of the stationary source shall submit to the SMAQMD Air Pollution Control Officer a complete Title V permit application for renewal no later than 12 months prior to the expiration date of the Title V permit.  
**[Basis: SMAQMD Rule 207 Section 301.4]**
2. The owner or operator of a stationary source shall submit to the SMAQMD Air Pollution Control Officer a complete Title V permit application for minor Title V permit modification when applicable. The application shall be submitted after receiving any required preconstruction permit from the SMAQMD and before commencing operation associated with the Minor Title V permit modification.  
**[Basis: SMAQMD Rule 207 Section 301.6]**
3. The owner or operator of a stationary source shall submit to the SMAQMD Air Pollution Control Officer a complete Title V permit application for Significant Title V permit modification when applicable. The application shall not be submitted prior to receiving any required preconstruction permit from the SMAQMD but no later than 12 months after commencing an operation associated with the Significant Title V permit modification. Where an existing federally enforceable Title V permit condition would prohibit such change in operation or the stationary source is not required to obtain a preconstruction permit, the owner or operator must obtain a Title V permit modification before commencing operation.  
**[Basis: SMAQMD Rule 207 Section 301.7]**
4. The applicant shall submit to the SMAQMD Air Pollution Control Officer timely updates to the Title V application as new applicable federal requirements become applicable to the source.  
**[Basis: SMAQMD Rule 207 Section 302.1]**
5. The applicant shall submit to the SMAQMD Air Pollution Control Officer any additional information necessary to correct any incorrect information in the Title V permit application upon becoming aware of such incorrect submittal or if the applicant is notified by the SMAQMD Air Pollution Control Officer of such incorrect submittal.  
**[Basis: SMAQMD Rule 207 Section 302.2]**
6. The applicant shall submit to the SMAQMD Air Pollution Control Officer any additional information relating to the Title V application within 30 days if such information is requested in writing by the SMAQMD Air Pollution Control Officer.  
**[Basis: SMAQMD Rule 207 Section 302.3]**
7. Title V permit expiration terminates the stationary source's right to operate unless a timely and complete Title V permit application for renewal has been submitted and the stationary source complies with SMAQMD Rule 207 Sections 303.1(a), (b), (c) and (d), in which case the existing Title V permit will remain in effect until the Title V permit renewal has been issued or denied.  
**[Basis: SMAQMD Rule 207 Section 303.2]**

### III. FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL

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8. Any Title V application form, report or compliance certification submitted pursuant to a federally enforceable requirement in this permit shall contain certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

**[Basis: SMAQMD Rule 207, Section 304]**

9. This Title V permit shall have a 5-year fixed term from the date of issuance. The Title V permit shall have a new 5-year fixed term from the date of final action on reopening if the responsible official chooses to submit to the SMAQMD a complete Title V application for renewal upon reopening of the Title V permit pursuant to SMAQMD Rule 207 Sections 411 or 412, and the Title V permit is renewed according to the administrative procedures listed in SMAQMD Rule 207 Sections 401 through 408.

**[Basis: SMAQMD Rule 207 Section 306]**

#### COMPLIANCE

10. The permittee must comply with all conditions of the Title V permit.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(1)]**

11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the Title V permit.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(2)]**

12. This Title V permit may be modified, revoked, reopened and reissued, or terminated for cause.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(3)]**

13. The permittee shall furnish to the SMAQMD Air Pollution Control Officer, within a reasonable time, any information that the SMAQMD Air Pollution Control Officer may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit pursuant to SMAQMD Rule 207 Section 411, or to determine compliance with this Title V permit. Upon request, the permittee shall also furnish to the SMAQMD Air Pollution Control Officer copies of records required to be kept by conditions of this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the U.S. EPA along with a claim of confidentiality.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(4)]**

14. Noncompliance with any federally enforceable requirement in this Title V permit is grounds for Title V permit termination, revocation and reissuance, modification, enforcement action, or denial of the Title V permit renewal application. Any violation of the Title V permit shall also be a violation of SMAQMD Rule 207.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(5)]**

15. A pending Title V permit action (e.g. a proposed permit revision) or notification of anticipated noncompliance does not stay any permit condition.

**[Basis: SMAQMD Rule 207 Section 305.1(k)(6)]**

### III. FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL

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16. This Title V permit does not convey any property rights of any sort or any exclusive privilege.  
**[Basis: SMAQMD Rule 207 Section 305.1(k)(7)]**
17. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the SMAQMD Air Pollution Control Officer or an authorized representative to perform all of the following:
- A. Enter upon the stationary source's premises where this 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 Title V permit;
  - C. Inspect at reasonable times, the stationary source, equipment (including monitoring and air pollution control equipment), practices and operations regulated or required under this Title V permit, and;
  - D. As authorized by the Federal Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the Title V permit conditions or applicable federal requirements.
- [Basis: SMAQMD Rule 207 Section 413.1]**
18. Compliance with the conditions of the Title V permit shall be deemed compliance with all applicable requirements identified in the Title V permit.  
**[Basis: SMAQMD Rule 207 Section 307]**

#### REPORTS AND RECORDKEEPING

##### 19. Monitoring Reports

- A. The permittee shall submit to the SMAQMD Air Pollution Control Officer at least once every six months, unless required more frequently by an applicable requirement, reports of all required monitoring.
  - i. All instances of deviations from Title V permit monitoring conditions must be clearly identified in such reports.
- B. The reporting periods for this permit shall be January 01 through June 30 and July 01 through December 31. The reports shall be submitted by July 30 and January 30 following each reporting period respectively.
- C. All required reports must be certified by the responsible official and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

**[Basis: SMAQMD Rule 207 Section 501.1]**

### III. FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL

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#### 20. Compliance Reports

- A. The permittee shall submit to the SMAQMD Air Pollution Control Officer and U.S. EPA (Air-3, U.S. EPA, Region IX) on an annual basis, unless required more frequently by additional applicable federal requirements such as Section 114(a)(3) and 504(b) (42 U.S.C. Sections 7414(a)(3) and 7661c(b)) of the Federal Clean Air Act, a certification of compliance by the responsible official with all terms and conditions contained in the Title V permit, including emission limitations, standards and work practices.
- B. The reporting period for this permit shall be January 01 through December 31. The report shall be submitted by January 30 following the reporting period.
- C. All required reports must be certified by the responsible official and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- D. The Compliance Certification Report shall include the following:
  - i. The identification of each term or condition of the Title V permit that is the basis of the certification.
  - ii. The method(s) used for determining the compliance status of the source, currently and over the reporting period, and whether such method(s) provides continuous or intermittent data.
  - iii. The status of compliance with the terms and conditions of the Title V permit for the period covered by the certification, based on the method designated in Section D.ii of this condition.
  - iv. Such other facts as the SMAQMD Air Pollution Control Officer may require to determine the compliance status of the source.
  - v. In accordance with SMAQMD Rule 207 Section 305, a method for monitoring the compliance of the stationary source with its emissions limitations, standards and work practices.

**[Basis: SMAQMD Rule 207 Section 413.4]**

- 21. The permittee shall report, within 24 hours of detection, any deviation from a federally enforceable Title V permit condition not attributable to an emergency. In order to fulfill the reporting requirement of this condition, the permittee shall notify the SMAQMD Air Pollution Control Officer by telephone followed by a written statement describing the nature of the deviation from the federally enforceable permit condition.

**[Basis: SMAQMD Rule 207 Section 501.3]**

### III. FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL

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22. All monitoring data and support information required by a federally enforceable applicable requirement must be kept by the permittee for a period of 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the federally enforceable applicable requirement in the Title V permit.

**[Basis: SMAQMD Rule 207 Section 502.3]**

#### RINGELMANN CHART

23. Except as otherwise provided in SMAQMD Rule 401 Section 100, a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is:

- A. As dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
- B. Of such opacity as to obscure a human observer's view, or a certified calibrated in-stack opacity monitoring system to a degree equal to or greater than No. 1 on the Ringelmann Chart.

**[Basis: SMAQMD Rule 401 Section 301]**

#### PARTICULATE MATTER

24. A person shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from any construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation. Reasonable precautions shall include, but are not limited to:

- A. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the construction of roadways or the clearing of land.
- B. Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles and other surfaces which can give rise to airborne dusts;
- C. Other means approved by the SMAQMD Air Pollution Control Officer.

**[Basis: SMAQMD Rule 403 Section 301]**

25. Except as otherwise provided in SMAQMD Rule 406, a person shall not discharge into the atmosphere from any source particulate matter in excess of 0.23 grams per dry standard cubic meter (0.1 grains per dry standard cubic foot).

**[Basis: SMAQMD Rule 404 Section 301]**

### **III. FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL**

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26. A person shall not discharge into the atmosphere particulate matter from the burning of any kind of material containing carbon in a free or combined state, from any single source of emission whatsoever, combustion contaminants in any state or combination thereof exceeding in concentration at the point of discharge: 0.23 grams per dry standard cubic meter (0.1 grains per dry standard cubic foot) of gas calculated to 12% carbon dioxide (CO<sub>2</sub>) at standard conditions.  
**[Basis: SMAQMD Rule 406 Section 302]**

#### **NITROGEN OXIDES**

27. A person shall only install within the SMAQMD either of the following:
- A. A natural gas-fired water heater that emits less than or equal to 40 nanograms of nitrogen oxides (calculated as NO<sub>2</sub>) per joule (93 pounds per billion Btu) of heat output; and is certified in accordance with Rule 414 Section 402.
  - B. A mobile home natural gas-fired water heater that emits less than or equal to 50 nanograms of nitrogen oxides (calculated as NO<sub>2</sub>) per joule (116 pounds per billion Btu) of heat output; and is certified in accordance with Rule 414 Section 402.
- [Basis: SMAQMD Rule 414 Section 301]**

#### **SULFUR COMPOUNDS**

28. A person shall not discharge into the atmosphere from any single source of emission whatsoever sulfur compounds in any state or combination thereof exceeding in concentration at the point of discharge: sulfur compounds, calculated as sulfur dioxide (SO<sub>2</sub>): 0.2% by volume.  
**[Basis: SMAQMD Rule 406 Section 301]**
29. Except as otherwise provided in SMAQMD Rule 420 Section 110, a person shall not burn any gaseous fuel containing sulfur compounds in excess of 1.14 grams per cubic meter (50 grains per 100 cubic feet) of gaseous fuel, calculated as hydrogen sulfide at standard conditions, or any liquid fuel or solid fuel having a sulfur content in excess of 0.5% by weight.  
**[Basis: SMAQMD Rule 420 Section 301]**

#### **ARCHITECTURAL COATING**

30. Any coating applied to stationary structures and their appurtenances, to mobile homes, to pavements, or to curbs, shall meet the requirements of SMAQMD Rule 442.  
**[Basis: SMAQMD Rule 442 (09-05-1996 version)]**
31. All VOC-containing materials shall be stored in closed containers when not in use. In use includes, but is not limited to: being accessed, filled, emptied, maintained or repaired.  
**[Basis: SMAQMD Rule 442 Section 304 (09-05-1996 version)]**
32. The permittee shall not use volatile organic compounds for the cleanup of spray equipment unless equipment for collection of the cleaning compounds and minimizing its evaporation to the atmosphere is used.  
**[Basis: SMAQMD Rule 442 Section 305 (09-05-1996 version)]**

### III. FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL

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33. The permittee shall keep a record of all architectural coatings purchased that are not clearly labeled as complying with the VOC content limits contained in SMAQMD Rule 442. Compliance in these cases can be determined by maintaining records of the manufacturer's certifications or by Material Safety Data Sheets (MSDS) that demonstrate compliance with the VOC limits of SMAQMD Rule 442.

**[Basis: SMAQMD Rule 442 (09-05-1996 version) and SMAQMD Rule 207 Section 305]**

#### EQUIPMENT BREAKDOWNS

34. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology based emission limitations if the following conditions are met:

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

- i. An emergency occurred and that the permittee can identify the cause(s) of the emergency.
- ii. The permitted facility was at the time being properly operated.
- iii. 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 Title V permit.
- iv. The permittee submitted notice of the emergency to the SMAQMD Air Pollution Control Officer within two working days of the time when emissions limitations were exceeded due to the emergency. The notice must contain a description of the emergency, and corrective actions taken.

B. In any enforcement proceedings, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

**[Basis: SMAQMD Rule 207 Section 414]**

35. The permittee shall notify the SMAQMD Air Pollution Control Officer of any occurrence which constitutes an emergency as defined in SMAQMD Rule 207 Section 212 as soon as reasonably possible, but no later than one hour after its detection. If the emergency occurs when the SMAQMD Air Pollution Control Officer cannot be contacted, their report of the emergency shall be made at the commencement of the next regular working day. The notification shall identify the time, specific location, equipment involved and to the extent known the cause(s) of the occurrence.

**[Basis: SMAQMD Rule 207 Section 501.2]**

#### TITLE VI REQUIREMENTS (OZONE DEPLETING SUBSTANCES)

36. Persons opening appliances containing CFCs for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156.

**[Basis: 40 CFR 82 Subpart F]**

### **III. FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL**

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37. Equipment used during the maintenance, service, repair or disposal of appliances containing CFCs must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.  
**[Basis: 40 CFR 82 Subpart F]**

38. Persons performing maintenance, service, repair or disposal of appliances containing CFCs must be certified by an approved technician certification program pursuant to 40 CFR 82.161.  
**[Basis: 40 CFR 82 Subpart F]**

#### **PAYMENT OF FEES**

39. The fee for (1) the issuance of an initial Title V operating permit, (2) the renewal and/or inspection of a Title V operating permit, (3) the modification of a Title V operating permit or (4) an administrative Title V permit amendment shall be based on the actual hours spent by the SMAQMD staff in evaluating the application and processing the operating permit. The fee shall be assessed in accordance with the hourly rate established in SMAQMD Rule 301 Section 308.12.  
**[Basis: SMAQMD Rule 207 Section 305.7 and SMAQMD Rule 301 Section 313]**

40. After the provisions for granting permits as set forth in SMAQMD Rule 207 have been complied with, the permittee will be notified by mail of the fee due and payable and the date the fee is due. If the fee is not paid by the specified due date, the fee shall be increased by one half the amount and the applicant/permittee shall be notified by mail of the increased fee. If the increased fee is not paid within 30 days after notice the application/permit will be canceled/revoked and the applicant/permittee will be notified by mail.  
**[Basis: SMAQMD Rule 207 Section 305.7]**

#### **ACCIDENTAL RELEASES**

41. If subject to Section 112(r) of the federal Clean Air Act of 1990 and 40 CFR 68, the permittee shall register and submit to the U.S. EPA the required data related to the risk management plan (RMP) for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities and accident prevention regulations promulgated under 40 CFR Part 68 do not limit in any way the general duty provisions under Section 112(r)(1) of the federal Clean Air Act of 1990.  
**[Basis: 40 CFR 68]**

42. If subject to Section 112(r) of the federal Clean Air Act of 1990 and 40 CFR 68, the permittee shall comply with the requirements of 40 CFR Part 68 no later than the latest of the following dates as provided in 68.10(a):

A. June 21, 1999,

B. Three years after the date on which a regulated substance is first listed under 68.130, or

### III. FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL

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C. The date on which a regulated substance is first present above a threshold quantity in a process.

**[Basis: 40 CFR 68]**

43. If subject to Section 112(r) of the federal Clean Air Act of 1990 and 40 CFR 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.

**[Basis: 40 CFR 68]**

44. If subject to Section 112(r) of the federal Clean Air Act of 1990 and 40 CFR 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) of the federal Clean Air Act of 1990 as part of the annual compliance certification as required by SMAQMD Rule 207 Section 413.4.

**[Basis: 40 CFR 68]**

#### EMISSION STATEMENTS

45. The permittee, when operating any stationary source that emits 25 tons or more per year of ROC or NOx (based on actual emissions for the twelve months reporting period requested), shall annually provide the SMAQMD Air Pollution Control Officer with a written emission statement showing actual emissions of ROC and NOx from that stationary source.

**[Basis: SMAQMD Rule 105]**

#### CLEAN AIR ACT FEES

46. After the U.S. EPA determines that the SMAQMD has failed to demonstrate attainment of the one hour ozone ambient air quality standard by the attainment year, the owner/operator of any major stationary source of ROC or NOx shall pay the Clean Air Act fees specified by the SMAQMD Air Pollution Control Officer in accordance with SMAQMD Rule 307.

**[Basis: SMAQMD Rule 307]**

#### **IV. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL**

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##### **APPLICABILITY:**

1. The requirements outlined in this section pertain to the SMAQMD Rule 201 Permit to Operate and are not part of the Title V permit.

##### **LOCAL PERMIT RENEWAL:**

2. Permits to Operate issued to Grafil, Inc., pursuant to SMAQMD Rule 201 (non-Title V permits to operate), shall be renewed annually on October 24 and upon payment of the permit renewal fee established pursuant to SMAQMD Rule 301.
3. The SMAQMD Air Pollution Control Officer shall review every Permit to Operate upon annual renewal, pursuant to California Health and Safety Code Section 42301(c), to determine that permit conditions are adequate to ensure compliance with, and the enforceability of, SMAQMD rules and regulations applicable to the article, machine, equipment or contrivance for which the permit was issued. Applicable SMAQMD rules and regulations shall include those which were in effect at the time the permit was issued or modified, or which have subsequently been adopted and made retroactively applicable to an existing article, machine, equipment or contrivance, by the SMAQMD Board of Directors. The SMAQMD Air Pollution Control Officer shall revise the conditions, if such conditions are not consistent, in accordance with all applicable rules and regulations.

##### **GENERAL**

4. The SMAQMD Air Pollution Control Officer and/or authorized representatives, upon the presentation of credentials shall be permitted:
  - A. To enter upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this permit to operate, and
  - B. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this Permit to Operate, and
  - C. To inspect any equipment, operation, or method required in this Permit to Operate, and
  - D. To sample emissions from the source or require samples to be taken.
5. Legible copies of all SMAQMD local permits shall be maintained on the premises with the equipment.

##### **EQUIPMENT OPERATION:**

6. The equipment shall be properly maintained.
7. This permit does not authorize the emission of air contaminants in excess of those allowed by California Health and Safety Code Division 26, Part 4, Chapter 3 or the Rules and Regulations of the SMAQMD.

#### **IV. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL**

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##### **EQUIPMENT BREAKDOWNS:**

8. The permittee shall notify the SMAQMD Air Pollution Control Officer of any occurrence which constitutes a breakdown as defined in SMAQMD Rule 602 Section 201 as soon as reasonably possible, but no later than one hour after its detection. If the breakdown occurs when the SMAQMD Air Pollution Control Officer cannot be contacted, the report of breakdown shall be made at the commencement of the next regular working day. The notification shall identify the time, specific location, equipment involved, and to the extent known, the cause(s) of the occurrence.
9. Upon notification of the breakdown condition, the SMAQMD Air Pollution Control Officer shall investigate the breakdown condition in accordance with uniform written procedures and guidelines relating to logging of initial reports on appropriate forms, investigation, and enforcement follow-up. If the occurrence does not constitute a breakdown condition, the SMAQMD Air Pollution Control Officer may take appropriate enforcement action.
10. An occurrence which constitutes a breakdown condition, and which persists only until the end of the production run or 24 hours, whichever is sooner (except for continuous air pollution monitoring equipment, for which the period shall be 96 hours) shall constitute a violation of any applicable emission limitation or restriction prescribed by SMAQMD Rules and Regulations; however, the SMAQMD Air Pollution Control Officer may elect to take no enforcement action if the owner or operator demonstrates to his satisfaction that a breakdown condition exists and the following requirements are met:
  - A. The notification required in SMAQMD Rule 602 Section 301.1 is made; and
  - B. Immediate appropriate corrective measures are undertaken and compliance is achieved, or the process is shutdown for corrective measures before commencement of the next production run or within 24 hours, whichever is sooner (except for continuous air pollution monitoring equipment for which the period shall be 96 hours). If the owner or operator elects to shut down rather than come into immediate compliance, (s)he must nonetheless take whatever steps are possible to minimize the impact of the breakdown within the 24 hour period; and
  - C. The breakdown does not interfere with the attainment and maintenance of any national ambient air quality standard.
11. An occurrence which constitutes a breakdown condition shall not persist longer than the end of the production run or 24 hours, whichever is sooner (except for continuous air pollution monitoring equipment, for which the period shall be 96 hours), unless an emergency variance has been obtained.
12. If the breakdown condition will either require more than 24 hours to correct or persists longer than the end of the production run (except for continuous air pollution monitoring equipment, for which the period shall be 96 hours) the owner or operator may, in lieu of shutdown, request the SMAQMD Air Pollution Control Officer to commence the emergency variance procedure set forth in SMAQMD Rule 602 Section 304.

#### **IV. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL**

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13. No emergency variance shall be granted unless the chairperson of the SMAQMD Hearing Board or other designated member(s) of the SMAQMD Hearing Board finds that:
  - A. The occurrence constitutes a breakdown condition;
  - B. Continued operation is not likely to create an immediate threat or hazard to public health or safety; and
  - C. The requirements for a variance set forth in California Health and Safety Code Sections 42352 and 42353 have been met;
  - D. The continued operation in a breakdown condition will not interfere with the attainment or maintenance of the national ambient air quality standards.
14. At any time after an emergency variance has been granted, the SMAQMD Air Pollution Control Officer may request for good cause that the SMAQMD Hearing Board chairperson or designated member(s) reconsider and revoke, modify or further condition the variance. The procedures set forth in SMAQMD Rule 602 Section 304.1 shall govern any further proceedings conducted under this section.
15. An emergency variance shall remain in effect only for as long as necessary to repair or remedy the breakdown condition, but in no event after a properly noticed hearing to consider an interim or 90 day variance has been held, or 15 days from the date of the subject occurrence, whichever is sooner.
16. Within one week after a breakdown condition has been corrected, the owner or operator shall submit a written report to the SMAQMD Air Pollution Control Officer on forms supplied by the SMAQMD Air Pollution Control Officer describing the causes of the breakdown, corrective measures taken, estimated emissions during the breakdown and a statement that the condition has been corrected, together with the date of correction and proof of compliance. The SMAQMD Air Pollution Control Officer may, at the request of the owner or operator for good cause, extend up to 30 days the deadline for submittal of the report described in this subsection.
17. The burden of proof shall be on the owner or operator of the source to provide sufficient information to demonstrate that a breakdown condition did occur. If the owner or operator fails to provide sufficient information, the SMAQMD Air Pollution Control Officer shall undertake appropriate enforcement action.
18. Any failure to comply, or comply in a timely manner, with the reporting requirements established in SMAQMD Rule 602 Sections 301.1 and 401 shall constitute a separate violation of SMAQMD Rule 602.
19. It shall constitute a separate violation of SMAQMD Rule 602 for any person to file with the SMAQMD Air Pollution Control Officer a report which falsely, or without probable cause, claims that an occurrence is a breakdown condition.

#### **IV. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - GENERAL**

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20. Severability - if any provision, clause, sentence, paragraph, section or part of these conditions for any reason is judged to be unconstitutional or invalid, such judgment shall not affect or invalidate the remainder of these conditions.

#### **ARCHITECTURAL COATINGS**

21. The permittee shall comply with the requirements of SMAQMD Rule 466 Solvent Cleaning when using volatile organic compounds for the cleanup of architectural coating application equipment.

**[Basis: SMAQMD Rule 466 Sections 301 and 302 (09-25-2008 version)]**

**V. A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC**  
**CARBON FIBER PROCESS LINE NOS. 31 AND 32**  
**APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3**  
**APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4**  
**APC BAGHOUSE NOS. 1 AND 2**

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**A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

● **Carbon Fiber Process Line No. 31**

SMAQMD Rule 201 P/O No. 21607 (for reference purposes only - not federally enforceable)

1. (6) Oxidation ovens, electric, vented to **APC Outside Thermal Oxidizer No. 1.**
2. (1) Low temperature furnace, electric, vented to **Inside Thermal Oxidizer No. 2.**
3. (1) High temperature furnace, electric, vented to **Inside Thermal Oxidizer No. 2.**
4. Electrolyte surface treatment process.
5. Fugitive emissions collection system from (2) Low temperature furnace end cap hoods, low temperature rodding exhaust, (2) rodding point hoods, (2) high temperature end cap hoods vented through process exhaust fan to **APC Outside Thermal Oxidizer No. 1.**

● **APC Outside Thermal Oxidizer No. 1**

SMAQMD Rule 201 P/O No. 11425 (for reference purposes only - not federally enforceable)

1. John Zink, 9.18 MMBTU/hour.
2. Venting (6) electric oxidation ovens, (4) end cap hoods, (2) rodding point hoods and low temperature rodding exhaust.

● **APC Inside Thermal Oxidizer No. 2**

SMAQMD Rule 201 P/O No. 15841 (for reference purposes only - not federally enforceable)

1. Zeeco, 2.4 MMBTU/hour.
2. Venting (1) electric low temperature furnace and (1) electric high temperature furnace.
3. Vented to **APC baghouse No. 1.**

● **APC Baghouse No. 1**

SMAQMD Rule 201 P/O No. 15840 (for reference purposes only - not federally enforceable)

1. JM Construction, Model 120 JMCE 100T.
2. 1,584 sq. ft. cloth filter area.
3. 1,200 cfm air flow rate.
4. Venting APC Inside Thermal Oxidizer No. 2.

● **Carbon Fiber Process Line No. 32**

SMAQMD Rule 201 P/O No. 21608 (for reference purposes only - not federally enforceable)

1. (6) Oxidation ovens, electric, vented to **APC Outside Thermal Oxidizer No. 3.**
2. (1) Low temperature furnace, electric, vented to **APC Inside Thermal Oxidizer No. 4.**
3. (1) High temperature furnace, electric, vented to **APC Inside Thermal Oxidizer No. 4.**
4. Electrolyte surface treatment process.
5. Fugitive emissions collection system from (2) Low temperature furnace end cap hoods, low temperature rodding exhaust, (2) rodding point hoods, (2) high temperature end cap hoods

**V. A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
CARBON FIBER PROCESS LINE NOS. 31 AND 32  
APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
APC BAGHOUSE NOS. 1 AND 2**

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- vented through process exhaust fan to **APC Outside Thermal Oxidizer No. 3.**  
6. Waste heat recovery boiler vented to **APC Baghouse No. 2.**

● **APC Outside Thermal Oxidizer No. 3**

SMAQMD Rule 201 P/O No. 11426 (for reference purposes only - not federally enforceable)

1. John Zink, 9.18 MMBTU/hour.
2. Venting (6) electric oxidation ovens, (4) end cap hoods, (2) rodding point hoods and low temperature rodding exhaust.

● **APC Inside Thermal Oxidizer No. 4**

SMAQMD Rule 201 P/O No. 18279 (for reference purposes only - not federally enforceable)

1. John Zink, 1.0 MMBTU/hour.
2. Venting (1) electric low temperature furnace and (1) electric high temperature furnace.
3. Vented to **APC Baghouse No. 2.**

● **APC Baghouse No. 2**

SMAQMD Rule 201 P/O No. 19659 (for reference purposes only - not federally enforceable)

1. JM Construction, Model 120 JMCE 100T.
2. 1,584 sq. ft. cloth filter area.
3. 1,500 cfm air flow rate.
4. Venting APC Inside Thermal Oxidizer No. 4 and waste heat recovery boiler.

The following equipment is not federally enforceable because its purpose is to monitor the air pollutant HCN which is not regulated by any federal rule or any SIP approved rule -

**Continuous Emission Monitoring System for HCN (1 primary and 1 backup analyzer)**

The CEM system monitors both Process Line No. 31 and Process Line No. 32.

Manufacturer: Laser, Inc.

Model: GasFinder

Serial No.: HCNFC 2001 and HCNFC 2003

Location: Monitors at the plant exhaust stack for Carbon Fiber Process Line Nos. 31 and 32

**V. B. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
 CARBON FIBER PROCESS LINE NOS. 31 AND 32  
 APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
 APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
 APC BAGHOUSE NOS. 1 AND 2**

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**B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this section are enforceable by the SMAQMD, U.S. EPA and the public.

**EMISSION LIMIT REQUIREMENTS**

- The combined emissions from Carbon Fiber Process Line Nos. 31 and 32 shall not exceed the following:

**[Basis: SMAQMD Rule 202]**

Pollutant	Maximum Allowable <u>Combined</u> Emissions from Carbon Fiber Process Line Nos. 31 and 32 lb/hour (based on 3 hour average)		
	Main Stack	Fugitive Exhaust	Total
ROC	3.32	0.02	3.34
NOx	5.74	N/A	5.74
SO2 (A)	5.994	N/A	5.994
PM10	5.2	N/A	5.2
CO	21.0	N/A	21.0

(A) The SO2 emission factor is based on:

- Combined SO2 emissions from the four thermal oxidizers (combined heat input rate of 23.16 MMBTU/hour) and a natural gas SO2 emission factor of 0.0006 lb/MMBTU from U.S. EPA AP42 Table 1.4-1 (09/1998).
- Carbon fiber manufacturing process SO2 emissions which are based on 20 ppmv SO2 and 31,000 scfm.

- The combined emissions from Carbon Fiber Process Line Nos. 31 and 32 shall not exceed the following:

**[Basis: SMAQMD Rule 202]**

Pollutant	Maximum Allowable <u>Combined</u> Emissions from Process Line Nos. 31 and 32 lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
ROC	7,214	7,295	7,375	7,375

**V. B. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
 CARBON FIBER PROCESS LINE NOS. 31 AND 32  
 APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
 APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
 APC BAGHOUSE NOS. 1 AND 2**

Pollutant	Maximum Allowable <u>Combined</u> Emissions from Process Line Nos. 31 and 32 lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
NOx	12,398	12,536	12,674	12,674
SO2	12,947	13,091	13,235	13,235
PM10	11,232	11,357	11,482	11,482
CO	45,360	45,864	46,368	46,368

**EQUIPMENT OPERATION REQUIREMENTS**

3. Except as provided in Condition No. 12.A, the Precursor Processing Rate for Carbon Fiber Process Line Nos. 31 and 32 shall not exceed the Precursor Processing Rate, divided by 0.9, that the Carbon Fiber Process Lines were operating at during the most recent complying source test, where compliance with the ROC, NOx, SO2, PM10 and CO emission rates outlined in Condition No. 1 was demonstrated. The Precursor Processing Rate shall be determined as follows (The data from the most recent source test is summarized in Attachment A indicating the Precursor Processing Rate.):

**[Basis: SMAQMD Rule 201 Section 405]**

$$\text{Precursor Processing Rate (kg/hour)} = \text{Line Speed} * \sum[\text{Number of Filaments} * \text{Decitex} * \text{Number of Ends}] * E-07$$

4. Carbon Fiber Process Line No. 31 shall not process fiber unless the exhaust from the oxidation ovens, LT furnace, HT furnace and fugitive emissions generated during process upsets, including startups, are vented, as appropriate, to the following equipment which is in compliance with all listed permit conditions:

A. APC Outside Thermal Oxidizer No. 1 (P/O No. 11425)

B. APC Inside Thermal Oxidizer No. 2 (P/O No. 15841)

C. APC Baghouse No. 1 (P/O No. 15840)

**[Basis: SMAQMD Rule 201 Section 405]**

**V. B. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
 CARBON FIBER PROCESS LINE NOS. 31 AND 32  
 APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
 APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
 APC BAGHOUSE NOS. 1 AND 2**

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5. Carbon Fiber Process Line No. 32 shall not process fiber unless the exhaust from the oxidation ovens, LT furnace, HT furnace and fugitive emissions generated during process upsets, including startups, are vented, as appropriate, to the following equipment which is in compliance with all listed permit conditions:
  - A. APC Outside Thermal Oxidizer No. 3 (P/O No. 11426)
  - B. APC Inside Thermal Oxidizer No. 4 (P/O No. 18279)
  - C. APC Baghouse No. 2 (P/O No. 19659)  
**[Basis: SMAQMD Rule 201 Section 405]**
  
6. The following minimum temperatures shall be maintained in the combustion zone of the thermal oxidizers when the temperature of the associated oxidation ovens is equal to or greater than 205 degrees C:  
**[Basis: SMAQMD Rule 201 Section 405]**

Equipment	Minimum Combustion Zone Temperature degrees C (1 hour average)
APC Outside Thermal Oxidizer No. 1 (P/O 11425)	750
APC Inside Thermal Oxidizer No. 2 (P/O 15841)	700
APC Outside Thermal Oxidizer No. 3 (P/O 11426)	750
APC Inside Thermal Oxidizer No. 4 (P/O 18279)	700

7. APC Baghouse No. 1 (P/O No. 15840) and APC Baghouse No. 2 (P/O No. 19659) shall operate continuously whenever the associated APC Inside Thermal Oxidizer No. 2 or No. 4 is in operation except as noted below.
  - A. Particulate emissions from the APC Inside Thermal Oxidizer No. 2 shall be allowed to bypass the associated APC Baghouse No. 1 for up to 5 minutes in each hour and vent directly to the main facility exhaust stack.

**V. B. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC**  
**CARBON FIBER PROCESS LINE NOS. 31 AND 32**  
**APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3**  
**APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4**  
**APC BAGHOUSE NOS. 1 AND 2**

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B. Particulate emissions from the APC Inside Thermal Oxidizer No. 4 shall be allowed to bypass the associated APC Baghouse No. 2 for up to 5 minutes in each hour and vent directly to the main facility exhaust stack.

C. Bypassing of APC Baghouse Nos. 1 and 2 shall not occur at the same time.  
**[Basis: SMAQMD Rule 201 Section 405]**

8. The discharge of collected material from the baghouse shall be into a covered container and any transfer of this material shall be performed in a manner that prevents fugitive emissions.  
**[Basis: SMAQMD Rule 201 Section 405]**

**MONITORING REQUIREMENTS**

9. The line speed meter and associated chart recorder shall be operated, maintained and calibrated to monitor and record line speed when the carbon fiber process is in operation.

A. In the event of a chart recorder failure, manual hourly line speed recordkeeping is allowed.

B. Manual recordkeeping shall not exceed 5 time periods per calendar year and each time period shall not exceed 24 hours.

**[Basis: SMAQMD Rule 201 Section 405]**

10. The temperature gauge and the associated chart recorder for each thermal oxidizer shall be operated, maintained and calibrated to monitor and record the thermal oxidizer combustion zone temperature whenever Carbon Fiber Process Line Nos. 31 or 32 are in operation.

A. In the event of a chart recorder failure, manual hourly temperature recordkeeping is allowed.

B. Manual recordkeeping shall not exceed 5 time periods per calendar year and each time period shall not exceed 24 hours.

**[Basis: SMAQMD Rule 201 Section 405]**

**RECORDKEEPING REQUIREMENTS**

11. The following records shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Monthly records, as specified in the table below, shall be made available for inspection within 30 days from the end of the reporting period.

**[Basis: SMAQMD Rule 201 Section 405]**

**V. B. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
 CARBON FIBER PROCESS LINE NOS. 31 AND 32  
 APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
 APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
 APC BAGHOUSE NOS. 1 AND 2**

Frequency	Information to be Recorded (A)
When the Carbon Fiber Process is operated	A. The maximum allowable Precursor Processing Rate calculated pursuant to the procedure in Condition No. 3. (kg/hr)  B. Production data for each production run which shall include the following:  i. Precursor Processing Rate (kg/hr).  ii. Line speed (m/hr).  iii. Number and type (Decitex of ends processed).  iv. Number of filaments.  v. Start and end dates and time.  C. The combustion zone temperature of Thermal Oxidizer Nos. 1, 2, 3 and 4.
When performing manual hourly line speed recordkeeping (Condition No. 9)	D. The length of time that each manual recordkeeping period lasted.  E. The cumulative number of time periods for the calendar year when manual recordkeeping was used.
When performing manual hourly combustion zone temperature recordkeeping (Condition No. 10)	F. The length of time that each manual recordkeeping period lasted.  G. The cumulative number of time periods for the calendar year when manual recordkeeping was used.
Monthly	H. Monthly facility natural gas usage (therms/month)

(A) Recorded information shall follow the recordkeeping format in Attachment B as approved by the SMAQMD Air Pollution Control Officer.

**V. B. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
 CARBON FIBER PROCESS LINE NOS. 31 AND 32  
 APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
 APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
 APC BAGHOUSE NOS. 1 AND 2**

**EMISSION REDUCTION CREDITS (ERC) REQUIREMENTS**

12. The permittee shall surrender (and has surrendered - See Condition Nos. 13 and 14) ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of emissions:  
**[Basis: SMAQMD Rule 202]**

Equipment - Carbon Fiber Process Line No. 31 Carbon Fiber Process Line No. 32	Amount of Emission Offsets for which ERCs are to be Surrendered lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
NOx	5598	5526	5446	5989
PM10	4320	4368	4416	4416

13. The following NOx ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 12:

**[Basis: SMAQMD Rule 202]**

Emission Reduction Credit Certificate No.	Face Value of NOx ERC Certificates Surrendered lb/quarter				Offset Ratio	NOx Value Applied to the Project Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
SMAQMD 99-00661 (Blue Diamond Biomass Boiler Shutdown)	6,718	6,631	6,536	7,187	1.2:1	5598	5526	5446	5989
NOx total						5598	5526	5446	5989

**V. B. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
CARBON FIBER PROCESS LINE NOS. 31 AND 32  
APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
APC BAGHOUSE NOS. 1 AND 2**

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14. The following PM10 ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 12:

**[Basis: SMAQMD Rule 202]**

Emission Reduction Credit Certificate No.	Face Value of PM10 ERC Certificates Surrendered lb/quarter				Offset Ratio	PM10 Value Applied to the Project Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
FRAQMD 93-2-03BT	5090	5200	5190	5160	1.5:1	3393	3467	3460	3440
FRAQMD 94-4-03BT	1529 (1560) (A)	1487 (1520) (A)	1577 (1610) (A)	1610 (1640) (A)	1.5:1 and 1.1:1 (B)	927	901	956	976
PM10 total						4320	4368	4416	4416

(A) NOTE - The permittee surrendered quarterly amounts on this ERC certificate that are larger than the required amounts. Amounts in parenthesis are the ERC certificate values.

(B) An additional offset ratio of 1.1:1 was applied (in addition to the 1.5:1 distance offset ratio) because SMAQMD staff analysis of the ERCs granted by the FRAQMD revealed that the actual PM10 emission reductions were overestimated by approximately 10%.

**SOURCE TESTING REQUIREMENTS**

15. An emissions test for ROC, NOx, SO2, PM10 and CO shall be conducted each calendar year to demonstrate compliance with Condition No. 1.

A. The maximum allowable Precursor Process Rate stated in Condition No. 3 shall not be in effect during the annual emission test. However, the Precursor Process Rate utilized during the emission test shall establish the maximum allowable Precursor Process Rate as stated in Condition No. 3.

B. Submit a Source Test Plan to the SMAQMD Air Pollution Control Officer for approval at least 30 days before the source test is to be performed.

C. Notify the SMAQMD Air Pollution Control Officer at least 7 days prior to the source test date if the date has changed from that approved in the Source Test Plan.

**V. B. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC**  
**CARBON FIBER PROCESS LINE NOS. 31 AND 32**  
**APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3**  
**APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4**  
**APC BAGHOUSE NOS. 1 AND 2**

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- D. Submit a Source Test Report to the SMAQMD Air Pollution Control Officer within 60 days from the completion of the source test.
- E. The SMAQMD Air Pollution Control Officer may waive any portion or all of the annual source test requirements if, in the SMAQMD Air Pollution Control Officer's sole judgment, prior test results indicate an adequate margin of compliance has been maintained.

**[Basis: SMAQMD Rule 201 Section 405]**

**V.C. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
CARBON FIBER PROCESS LINE NOS. 31 AND 32  
APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
APC BAGHOUSE NOS. 1 AND 2**

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C. **NON-FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC:** The requirements specified under this section are enforceable by the SMAQMD only.

**EMISSION LIMIT REQUIREMENTS**

16. The concentration of HCN in the plant exhaust stack, as measured by the primary continuous emission monitor (or backup continuous emission monitor when active), shall not exceed the following:

Pollutant	Maximum Allowable Emission Concentration in the Plant Exhaust Stack ppmv (A)
HCN	95

(A) Concentration averaged over a period of one hour as shown on the HCN monitor's strip chart (operating at a strip chart speed of 20 mm/hour or greater).

17. No air contaminant shall be released into the atmosphere that causes a public nuisance.

**MONITORING REQUIREMENTS**

18. The primary or backup HCN CEM system shall be operated, maintained and calibrated to monitor HCN concentrations in the plant exhaust stack when Carbon Fiber Process Line No. 31 or 32 is in operation.

A. The permittee shall follow the HCN CEM system maintenance and calibration schedule (Attachment C) approved by the SMAQMD Air Pollution Control Officer.

B. The stripchart recorder shall operate at a minimum speed of 20 mm/hour.

**RECORDKEEPING REQUIREMENTS**

19. The following records shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request.

Frequency	Information to be Recorded (A)
When Carbon Fiber Process Line No. 31 or 32 is operated	A. Continuous HCN concentration at the plant exhaust stack (ppmv).

**V.C. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
 CARBON FIBER PROCESS LINE NOS. 31 AND 32  
 APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
 APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
 APC BAGHOUSE NOS. 1 AND 2**

	B. HCN monitor maintenance and calibration activity log.
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(A) Recorded information shall follow the recordkeeping format in Attachment B as approved by the SMAQMD Air Pollution Control Officer.

**REPORTING REQUIREMENTS**

20. The following reports shall be submitted to the SMAQMD Air Pollution Control Officer when applicable.

Frequency	Information to be Reported
Within 8 hours of the HCN CEM system indicating HCN concentrations are in excess of 95 ppmv, averaged over a period of one hour.	A. Notify the SMAQMD Air Pollution Control Officer that there has been an exceedance.
Within 7 days of an exceedance described above.	B. Submit a written follow-up report to the SMAQMD Air Pollution Control Officer which shall include the following: <ul style="list-style-type: none"> <li>i. Date and time of exceedance.</li> <li>ii. HCN concentration (ppmv).</li> <li>iii. Any shutdown procedures implemented.</li> </ul>

**SOURCE TESTING REQUIREMENTS**

21. An emission test for HCN shall be conducted each calendar year to demonstrate compliance with Condition No. 16.

- A. The maximum allowable Precursor Process Rate stated in Condition No. 3 shall not be in effect during the annual emission test. However, the Precursor Process Rate utilized during the emission test shall establish the maximum allowable Precursor Process Rate as stated in Condition No. 3.
- B. Submit a Source Test Plan to the SMAQMD Air Pollution Control Officer for approval at least 30 days before the source test is to be performed.
- C. Notify the SMAQMD Air Pollution Control Officer at least 7 days prior to the source test

**V.C. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
CARBON FIBER PROCESS LINE NOS. 31 AND 32  
APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
APC BAGHOUSE NOS. 1 AND 2**

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date if the date has changed from that approved in the Source Test Plan.

- D. Submit a Source Test Report to the SMAQMD Air Pollution Control Officer within 60 days from the completion of the source test.
- E. The SMAQMD Air Pollution Control Officer may waive any portion or all of the annual source test requirements if, in the SMAQMD Air Pollution Control Officer's sole judgment, prior test results indicate an adequate margin of compliance has been maintained.

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
 CARBON FIBER PROCESS LINE NOS. 31 AND 32  
 APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
 APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
 APC BAGHOUSE NOS. 1 AND 2**

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**ATTACHMENT A**

**SUMMARY OF THE MOST RECENT PRECURSOR PROCESSING  
 RATES DEMONSTRATED DURING COMPLYING SOURCE TESTS**

Date of Test	Carbon Fiber Manufacturing Line No. 31		Carbon Fiber Manufacturing Line No. 32	
	Rate During Test  kg/hour	Rate During Test Divided by 0.9 kg/hour	Rate During Test  kg/hour	Rate During Test Divided by 0.9 kg/hour
11-11-2008	229.8	255	244.6	272
11-13-2007	243.3	270	266.8	296
12-11-2006	248.7	276	266.8	296
10-16-2005	242.4	269	270.3	300

**V.C. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
CARBON FIBER PROCESS LINE NOS. 31 AND 32  
APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
APC BAGHOUSE NOS. 1 AND 2**

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**ATTACHMENT B**

**APPROVED RECORDKEEPING FORMAT**  
(Not Federally Enforceable)

**V.C. NON-FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
CARBON FIBER PROCESS LINE NOS. 31 AND 32  
APC OUTSIDE THERMAL OXIDIZER NOS. 1 AND 3  
APC INSIDE THERMAL OXIDIZER NOS. 2 AND 4  
APC BAGHOUSE NOS. 1 AND 2**

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## ATTACHMENT C

### HCN MONITOR MAINTENANCE AND CALIBRATION PROCEDURE (Not Federally Enforceable)

1. **Manufacturer:** Boreal Laser, Inc.  
#13 51127 RR 255  
Spruce Grove, AB.  
Canada T7Y 1A8

Monitor No. 1

Model No. GasFinder  
Serial No. HCNFC 2001  
Method: Light Absorption

Monitor No. 2

Model No. GasFinder  
Serial No. HCNFC 2003  
Method: Light Absorption

Two Boreal Laser Inc. (Model GasFinder hydrogen cyanide monitors are used to sample the stack via a common sample line. The Boreal Laser CEMS consists of three components: The analyzer, the remote probe on the stack and the data acquisition and handling system (DAHS). The HCN analyzer displays the concentration of HCN as a digital readout on the instrument panel and records the HCN concentration on a strip chart recorder for a permanent record. Two Boreal Laser CEMS will be utilized. One instrument will continuously monitor HCN from the main stack. The second unit will be a spare that will be installed in the event of a failure of the primary unit. The time required to replace the CEMS and for it to stabilize is approximately twenty four hours. During such CEMS downtime, Grafil must revert to hourly Draeger tube readings for a period of no greater than twenty four hours. These readings will be recorded.

2. **Calibration**

The instrument contains a sample of HCN of known concentration in a sealed glass ampoule. The CEMS is self calibrating every few seconds by comparing the measured light intensity with the stored reference data. The instrument is in calibration and functioning correctly if the two intensities match. If the calibrated intensity is less than 95% of the reference standard, the CEMS shuts down and displays an error message. Then, the unit must be returned to the manufacturer for repair and the spare analyzer will be installed in its place.

3. **Routine Maintenance**

The manufacturer's recommended range of light level is 1,000 to 11,000 on the analyzer's scale. The overall intensity of the reflected light decreases as fine particulate matter accumulates on the reflector. As the light intensity approaches the value of 1,000 on the analyzer scale, Grafil will perform clean up on the reflector.

### V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC BOILER NO. 3

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**A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

**Boiler No. 3**

P/O No.: 21254 (for reference purposes only - not federally enforceable)  
Manufacturer: Cleaver Brooks  
Model No.: Promethean CBI 200-150-150  
Rating: 6.124 MMBTU/hr heat input  
Fuel: Natural gas

**B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this subsection are enforceable by the SMAQMD, U.S. EPA and the public.

#### EMISSION LIMIT REQUIREMENTS

1. Boiler No. 3 shall not emit:

A. Nitrogen oxides (NOx) in excess of 9 ppmvd.

B. Carbon monoxide (CO) in excess of 400 ppmvd.

averaged over a period of 15 consecutive minutes, corrected to 3% O<sub>2</sub>.

**[Basis: SMAQMD Rule 411]**

2. The emissions from Boiler No. 3 shall not exceed the following limits:

**[Basis: SMAQMD Rule 202]**

Pollutant	Emission Factor (A) lb/MMft <sup>3</sup>	Maximum Allowable Emissions (B) lb/quarter
ROC	5.5	23
NOx	10.9	46
SO <sub>2</sub>	0.6	3
PM <sub>10</sub>	7.6	32
CO	295	1242

(A) Emission factors for ROC, SO<sub>2</sub> and PM<sub>10</sub> are from U.S. EPA AP42, Tables 1.4-1 and 1.4-2 (02/98).

Emission factors for NOx and CO are based on 9 ppmvd and 400 ppmvd at 3% O<sub>2</sub>, respectively, as provided by manufacturer.

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
BOILER NO. 3**

---

(B) Emissions are based on a maximum fuel usage of 4,211,000 ft<sup>3</sup> of natural gas/quarter.

**EQUIPMENT OPERATION REQUIREMENTS**

3. Boiler No. 3 shall only use pipeline quality natural gas as fuel.  
**[Basis: SMAQMD Rule 201 Section 405]**
4. Boiler No. 3 shall be equipped with a non-resetting, pressure and temperature compensated, totalizing fuel meter to ensure compliance with Condition Nos. 2 and 5. The totalizing function of the meter shall have the ability to read up to at least 100 MMft<sup>3</sup> of gas before rolling over.  
**[Basis: SMAQMD Rule 201 section 405]**
5. The natural gas fuel usage for Boiler No. 3 shall not exceed the following limit:  
**[Basis: SMAQMD Rule 202]**

Equipment	Maximum Allowable Fuel Usage ft <sup>3</sup> of natural gas/quarter
Boiler No. 3	4,211,000

**RECORDKEEPING REQUIREMENTS**

6. The following records shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly records shall be made available within 30 days of the end of the reporting period.  
**[Basis: SMAQMD Rule 201 Section 405]**

Frequency	Information to be Recorded
At all times	A. Source test reports.
Quarterly	B. Total natural gas fuel usage. (ft <sup>3</sup> /quarter)

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
BOILER NO. 3**

---

**EMISSION REDUCTION CREDITS (ERC) REQUIREMENTS**

7. The permittee shall surrender (and has surrendered - See Condition No. 8) ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of emissions:

**[Basis: SMAQMD Rule 202]**

Equipment - Boiler No. 3	Amount of Emission Offsets for which ERCs are to be Surrendered lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
NOx	46	46	46	46

8. The following NOx ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 7:

**[Basis: SMAQMD Rule 202]**

Emission Reduction Credit Certificate No.	Face Value of NOx ERC Certificates Surrendered lb/quarter				Offset Ratio	NOx Value Applied to the Project Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
SMAQMD 09-01052 (Grafil Boiler Shutdown)	46	46	46	46	1.0:1	46	46	46	46
NOx total						46	46	46	46

**SOURCE TESTING REQUIREMENTS**

9. An emissions test for NOx and CO shall be conducted in 2007 and every second calendar year thereafter to demonstrate compliance with Condition No. 1.
- A. Submit a Source Test Plan to the SMAQMD Air Pollution Control Officer for approval at least 30 days before the source test is to be performed.
  - B. Notify the SMAQMD Air Pollution Control Officer at least 7 days prior to the source test date if the date changes from that approved in the Source Test Plan.
  - C. Operate the boiler as close as physically possible to the rated capacity during the

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
BOILER NO. 3**

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source test.

D. Submit a Source Test Report to the SMAQMD Air Pollution Control Officer within 60 days from the completion of the source test.

**[Basis: SMAQMD Rule 411]**

10. Source test methods used shall be those specified in SMAQMD Rule 411 Section 501:

A. Oxides of Nitrogen – CARB Method 100 or U.S. EPA Method 7E.

B. Carbon Monoxide – CARB Method 100 or U.S. EPA Method 10.

C. Stack Gas Oxygen – CARB Method 100 or U.S. EPA Method 3A.

D. Carbon Dioxide – CARB Method 100 or U.S. EPA Method 3A.

**[Basis: SMAQMD Rule 411]**

## **V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC BOILER NO. 4**

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- A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

**Boiler No. 4**

P/O No.: 20835 (for reference purposes only - not federally enforceable)  
Manufacturer: Cleaver Brooks  
Model No.: 4WI-700-100-150  
Rating: 4.8 MMBTU/hr heat input  
Fuel: Natural gas

- B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this subsection are enforceable by the SMAQMD, U.S. EPA and the public.

### **EMISSION LIMIT REQUIREMENTS**

1. Boiler No. 4 shall not emit:

A. Nitrogen oxides (NO<sub>x</sub>) in excess of 9 ppmvd.

B. Carbon monoxide (CO) in excess of 100 ppmvd.

averaged over a period of 15 consecutive minutes, corrected to 3% O<sub>2</sub>.

**[Basis: SMAQMD Rule 411]**

2. The emissions from Boiler No. 4 shall not exceed the following limits:

**[Basis: SMAQMD Rule 202]**

Pollutant	Emission Factor (A) lb/MMft <sup>3</sup>	Maximum Allowable Emissions (B) lb/quarter
ROC	5.5	10
NO <sub>x</sub>	10.9	21
SO <sub>2</sub>	0.6	1
PM <sub>10</sub>	7.6	14
CO	74	141

(A) Emission factors for ROC, SO<sub>2</sub> and PM<sub>10</sub> are from U.S. EPA AP42, Tables 1.4-1 and 1.4-2 (02/98).

Emission factors for NO<sub>x</sub> and CO are based on 9 ppmvd and 400 ppmvd at 3% O<sub>2</sub>, respectively, as provided by the manufacturer.

(B) Emissions are based on a maximum fuel usage of 1,907,000 ft<sup>3</sup> of natural gas/quarter.

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
BOILER NO. 4**

---

**EQUIPMENT OPERATION REQUIREMENTS**

3. Boiler No. 4 shall only use pipeline quality natural gas as fuel.  
**[Basis: SMAQMD Rule 201 Section 405]**
4. Boiler No. 4 shall be equipped with a non-resetting, pressure and temperature compensated, totalizing fuel meter to ensure compliance with Condition Nos. 2 and 5. The totalizing function of the meter shall have the ability to read up to at least 100 MMft3 of gas before rolling over.  
**[Basis: SMAQMD Rule 201 section 405]**
5. The natural gas fuel usage for Boiler No. 4 shall not exceed the following limit:  
**[Basis: SMAQMD Rule 202]**

Equipment	Maximum Allowable Fuel Usage ft3 of natural gas/quarter
Boiler No. 4	1,907,000

**RECORDKEEPING REQUIREMENTS**

6. The following records shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly records shall be made available within 30 days of the end of the reporting period.  
**[Basis: SMAQMD Rule 201 Section 405]**

Frequency	Information to be Recorded
At all times	A. Source test reports.
Quarterly	B. Total natural gas fuel usage. (ft3/quarter)

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
 BOILER NO. 4**

---

**EMISSION REDUCTION CREDITS (ERC) REQUIREMENTS**

7. The permittee shall surrender (and has surrendered - See Condition No. 8) ERCs to the SMAQMD Air Pollution Control Officer to offset the following amount of emissions:  
**[Basis: SMAQMD Rule 202]**

Equipment - Boiler No. 4	Amount of Emission Offsets for which ERCs are to be Surrendered lb/quarter			
	Quarter 1	Quarter 2	Quarter 3	Quarter 4
NOx	21	21	21	21

8. The following NOx ERCs have been surrendered to the SMAQMD Air Pollution Control Officer to comply with the SMAQMD Rule 202 New Source Review requirement as stated in Condition No. 7:  
**[Basis: SMAQMD Rule 202]**

Emission Reduction Credit Certificate No.	Face Value of NOx ERC Certificates Surrendered lb/quarter				Offset Ratio	NOx Value Applied to the Project Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
SMAQMD 09-01051 (Grafil Boiler Shutdown)	21	21	21	21	1.0:1	21	21	21	21
NOx total						21	21	21	21

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
 INTERNAL COMBUSTION ENGINE NO. 1, EMERGENCY USE, GENERATOR**

**A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

**Internal Combustion Engine No. 1, Emergency Use, Electrical Generator**

P/O No.: 15839 (for reference purposes only - not federally enforceable)  
 Manufacturer: Chrysler  
 Model No.: LH318  
 Serial No.: 840272  
 Type: 4 stroke rich burn  
 Rating: 187 bhp at 4000 rpm  
 Displacement: 318 cubic inches  
 Fuel: Propane  
 Equipment driven: Electrical generator

**B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this subsection are enforceable by the SMAQMD, U.S. EPA and the public.

**EMISSION LIMIT REQUIREMENTS**

1. The emissions from the IC engine No. 1 shall not exceed the following limits:  
**[Basis: SMAQMD Rule 202]**

Pollutant	Emission Factor (A) g/hp-hr	Maximum Allowable Emissions (B)	
		lb/quarter	lb/year
ROC	0.14	12	12
NOx	9.98	823	823
SO2	0.002	0.2	0.2
PM10	0.152	13	13
CO	8.62	711	711

(A) Emission factors for ROC, NOx and CO are from U.S. EPA AP42, Table 3.2-2, (1/95). Emission factors for SO2 and PM10 are from U.S. EPA AP42, Table 3.1-2, (1/95). Based on heat input, propane emissions are assumed the same as for natural gas combustion.  
 (B) Emissions are based on 187 hp, 200 hours/quarter and 200 hours/year of operation.

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
INTERNAL COMBUSTION ENGINE NO. 1, EMERGENCY USE, GENERATOR**

---

**EQUIPMENT OPERATION REQUIREMENTS**

2. The IC engine No. 1 shall operate only for the following purposes and shall not operate in exceedance of the following limits:

**[Basis: SMAQMD Rule 201 Section 405]**

Type of Operational Hours	Maximum Allowable Operation	
	Hours/quarter	Hours/year
Maintenance Purposes (A)	100	100
All operation - maintenance and emergency (B)	200	200

(A) Maintenance purposes is defined as: the operation of an IC engine in order to preserve the integrity of the IC engine, its associated electrical generator or the facility's electrical distribution system.

(B) Emergency is defined as: when electrical service from the serving utility is interrupted by an unforeseeable event.

3. The IC engine No. 1 shall be equipped with a non-resetting hour meter, with a minimum display capability of 9999 hours, to ensure compliance with Condition Nos. 1 and 2.

**[SMAQMD Rule 201 Section 405]**

4. Upon request of the SMAQMD Air Pollution Control Officer, once each year, during daylight hours, the IC engine No. 1 shall be run from a cold start condition at maximum anticipated load, for observation of compliance with opacity limitations.

**[Basis: SMAQMD Rule 201 Section 405]**

5. The IC engine No. 1 shall only use propane as a fuel.

**[Basis: SMAQMD Rule 201 Section 405]**

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
INTERNAL COMBUSTION ENGINE NO. 1, EMERGENCY USE, GENERATOR**

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**RECORDKEEPING REQUIREMENTS**

6. The following records shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly and yearly records shall be made available for inspection within 30 days from the end of the reporting period.

**[Basis: SMAQMD Rule 201 Section 405]**

Frequency	Information to be Recorded
When operated	A. Date B. Purpose – either maintenance or emergency power. C. Number of hours of operation.
Quarterly	D. Total number of hours of operation for maintenance (hours/quarter). E. Total number of hours of operation for emergency power (hours/quarter).
Yearly	F. Total number of hours of operation for maintenance (hours/year). G. Total number of hours of operation for emergency of power (hours/year).

**SOURCE TESTING REQUIREMENTS**

None

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
 INTERNAL COMBUSTION ENGINE NO. 2, EMERGENCY USE, FIRE PUMP**

---

**A. EQUIPMENT DESCRIPTION:** The information specified under this section is enforceable by the SMAQMD, U.S. EPA and the public.

The requirements specified under the following sections apply to the following equipment:

**Internal Combustion Engine No. 2, Emergency Use, Fire Pump**

P/O No.: 21750 (for reference purposes only - not federally enforceable)  
 Manufacturer: Clark/John Deere  
 Model No.: JU6H-UFADN0/6068HFC28D  
 Type: 4 stroke  
 Rating: 197 bhp at 1760 rpm  
 Displacement: 414 cubic inches  
 Fuel: Diesel fuel  
 Equipment driven: Fire pump

**B. EQUIPMENT SPECIFIC FEDERALLY ENFORCEABLE REQUIREMENTS:** The requirements specified under this subsection are enforceable by the SMAQMD, U.S. EPA and the public.

**EMISSION LIMIT REQUIREMENTS**

1. The emissions from the IC engine No. 2 shall not exceed the following limits:  
**[Basis: SMAQMD Rule 202]**

Pollutant	Emission Factor (A) g/hp-hr	Maximum Allowable Emissions (B)	
		lb/quarter	lb/year
ROC + NOx	3.0	261	261
ROC	1.0	87	87
NOx	3.0	261	261
SO2	0.0048	0.4	0.4
PM10	0.15	13	13
CO	2.6	226	226

(A) Emission factors for ROC, NOx and CO are based on the SMAQMD BACT limits.  
 SO2 emission factor is based on 15 ppmw S in the diesel fuel.  
 PM10 emission factor is based on SMAQMD T-BACT limits.

(B) Emissions are based on 197 hp, 200 hours/quarter and 200 hours/year of operation.

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
INTERNAL COMBUSTION ENGINE NO. 2, EMERGENCY USE, FIRE PUMP**

---

**EQUIPMENT OPERATION REQUIREMENTS**

2. The IC engine No. 2 shall operate only for the following purposes and shall not operate in exceedance of the following limits:

**[Basis: SMAQMD Rule 201 Section 405]**

**[Basis: Title 17, California Code of Regulations, Section 93115 - Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines]**

Type of Operational Hours	Maximum Allowable Operation	
	Hours/quarter	Hours/year
Maintenance Purposes (A)	50	50
All operation - maintenance and emergency (B)	200	200

(A) Maintenance purposes is defined as: the operation of an IC engine in order to preserve the integrity of the IC engine and its associated fire pump, the facility's fire suppression system or when required by the SMAQMD to verify compliance with the applicable rules and regulations.

(B) Emergency is defined as: when a fire is detected and the fire pump is operated to supply water for fire suppression or when there is an unforeseen loss of pressure in the fire suppression system such that the fire pump is required to operate in order to maintain sufficient pressure.

3. The IC engine No. 2 shall be equipped with a non-resetting hour meter, with a minimum display capability of 9999 hours, to ensure compliance with Condition Nos. 1 and 2.

**[Basis: SMAQMD Rule 201 Section 405]**

4. Upon request of the SMAQMD Air Pollution Control Officer, once each year, during daylight hours, the IC engine No. 2 shall be run from a cold start condition at maximum anticipated load, for observation of compliance with opacity limitations.

**[Basis: SMAQMD Rule 201 Section 405]**

5. The IC engine No. 2 shall be fueled with:

A. CARB diesel fuel, or

B. an alternative diesel fuel that meets the requirements of the CARB Verification Procedure codified in Title 13, CCR, sections 2700-2710, or

C. an alternative fuel (natural gas, propane, ethanol, or methanol), or

D. CARB diesel fuel utilizing fuel additives that meets the requirements of the CARB Verification Procedure codified in Title 13, CCR, sections 2700-2710, or

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
 INTERNAL COMBUSTION ENGINE NO. 2, EMERGENCY USE, FIRE PUMP**

E. any combination of A. through D. above.

**[Basis: Title 17, California Code of Regulations, Section 93115 - Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines]**

**RECORDKEEPING REQUIREMENTS**

6. The following records shall be continuously maintained onsite for the most recent five year period and shall be made available to the SMAQMD Air Pollution Control Officer upon request. Quarterly and yearly records shall be made available for inspection within 30 days from the end of the reporting period.

**[Basis: SMAQMD Rule 201 Section 405]**

Frequency	Information to be Recorded
All fuel deliveries	<p>A. The owner or operator shall document fuel use through the retention of fuel purchase records that account for all fuel used in the engine and all fuel purchased for use in the engine, and, at a minimum, contain the following information for each individual fuel purchase transaction:</p> <ul style="list-style-type: none"> <li>i. identification of the fuel purchased as either CARB Diesel, or an alternative diesel fuel that meets the requirements of the Verification Procedure, or an alternative fuel, or CARB Diesel fuel used with additives that meet the requirements of the Verification Procedure, or any combination of the above;</li> <li>ii. amount of fuel purchased;</li> <li>iii. date when the fuel was purchased;</li> <li>iv. signature of owner or operator or representative of owner or operator who received the fuel; and</li> <li>v. signature of fuel provider indicating fuel was delivered.</li> </ul> <p><b>[Basis: Title 17, California Code of Regulations, Section 93115 - Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines]</b></p>
When operated	<p>B. Date</p> <p>C. Purpose – either maintenance or emergency power.</p> <p>D. Number of hours of operation.</p>

**V.A. FEDERALLY ENFORCEABLE REQUIREMENTS - EQUIPMENT SPECIFIC  
INTERNAL COMBUSTION ENGINE NO. 2, EMERGENCY USE, FIRE PUMP**

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Frequency	Information to be Recorded
Quarterly	E. Total number of hours of operation for maintenance (hours/quarter). F. Total number of hours of operation for emergency power (hours/quarter).
Yearly	G. Total number of hours of operation for maintenance (hours/year). H. Total number of hours of operation for emergency of power (hours/year).

**SOURCE TESTING REQUIREMENTS**

None

## VI. INSIGNIFICANT EMISSIONS UNITS

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The following systems are considered insignificant emissions units and are not subject to equipment specific requirements. However, these units are required to comply with all applicable general requirements:

<b>Equipment Description</b>	<b>Basis for the Exemption</b>
Refrigeration and air conditioning units Vacuum cleaning system	SMAQMD Rule 201 Section 115 Refrigeration, air conditioning units and vacuum cleaning systems not designed to remove air contaminants generated by equipment which would require a permit.
Cold solvent cleaner	SMAQMD Rule 201 Section 118.3 < 100 gallons capacity, unheated and non-conveyorized.
Two laboratory rooms	SMAQMD Rule 201 Section 120 Laboratory equipment used for chemical or physical analysis.
Epoxy resin mixers Water-based nylon coating fiber processing line Surface treatment of the fibers with an aqueous ammonium salt solution Nitrogen tank Reverse osmosis system	SMAQMD Rule 201 Section 122 Other equipment which would emit any pollutant, without the benefit of air pollution control devices, at a rate less than 2 pounds in any 24 hour period.

## **VII. ACRONYMS, ABBREVIATIONS AND UNITS OF MEASURE**

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Acronyms, abbreviations and units of measure used in this permit are defined as follows:

**ASTM**

American Society for Testing and Materials

**BACT**

Best Available Control Technology.

**CAA**

The federal Clean Air Act.

**CARB**

California Air Resources Board.

**CEM System**

Continuous emission monitoring system.

**CFC**

Chloro-fluoro-carbons. A class of compounds responsible for destroying ozone in the upper atmosphere.

**CFR**

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

**CO**

Carbon monoxide.

**CO<sub>2</sub>**

Carbon dioxide.

**ERC**

Emission reduction credit.

**Federally Enforceable**

All limitations and conditions which are enforceable by the Administrator of the U.S. EPA including those requirements developed pursuant to 40 CFR Part 51, Subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPs), Part 63 (HAP) and Part 72 (Permits Regulation, Acid Rain) including limitations and conditions contained in operating permits issued under a U.S. EPA approved program that has been incorporated into the California SIP.

**HCN**

Hydrogen cyanide.

**NESHAP**

## **VII. ACRONYMS, ABBREVIATIONS AND UNITS OF MEASURE**

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National Emission Standards for Hazardous Air Pollutants (see 40 CFR Parts 61 and 63).

### **NO<sub>x</sub>**

Nitrogen oxides.

### **NSPS**

New Source Performance Standards. U.S. EPA standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the federal Clean Air Act and implemented by 40 CFR Part 60 and SMAQMD Regulation 8.

### **NSR**

New Source Review. A federal program for pre-construction review and permitting of new and modified sources of pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the federal Clean Air Act and implemented by 40 CFR Parts 51 and 52 and SMAQMD Rule 202. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

### **O<sub>2</sub>**

Oxygen.

### **Offset Requirement**

A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of ROC, NO<sub>x</sub>, SO<sub>2</sub> and PM<sub>10</sub>.

### **PM**

Particulate matter.

### **PM<sub>10</sub>**

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns.

### **PSD**

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of those air pollutants for which the SMAQMD is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the federal Clean Air Act and implemented by 40 CFR Part 52.

### **ROC**

Reactive organic compounds.

### **SIP**

State Implementation Plan. CARB and SMAQMD programs and regulations approved by U.S. EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the federal Clean Air Act.

### **SMAQMD**

Sacramento Metropolitan Air Quality Management District.

### **SO<sub>2</sub>**

## VII. ACRONYMS, ABBREVIATIONS AND UNITS OF MEASURE

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Sulfur dioxide.

### **Title V**

Title V of the federal Clean Air Act. Title V requires the SMAQMD to operate a federally enforceable operating permit program for major stationary sources and other specified sources.

### **TSP**

Total suspended particulate.

### **U.S. EPA**

The federal Environmental Protection Agency.

### **VOC**

Volatile Organic Compounds.

### **UNITS OF MEASURE:**

BTU	=	British Thermal Unit
cf	=	cubic feet
cfm	=	cubic feet per minute
cm	=	centimeter
ft <sup>3</sup>	=	cubic feet
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inch
kg	=	kilogram
max	=	maximum
m <sup>2</sup>	=	square meter
min	=	minute or minimum
mm	=	millimeter
MM	=	million
ppmvd	=	parts per million by volume dry
ppmw	=	parts per million by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
quarter	=	calendar quarter
RVP	=	Reid vapor pressure
scfm	=	standard cubic feet per minute
yr	=	year