

# ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## AIR QUALITY OPERATING PERMIT

Permit No. GP-A

Issue Date: June 7, 2005  
Expiration Date: June 6, 2010

The Department of Environmental Conservation, under the authority of AS 46.03, AS 46.14, and 18 AAC 50, issues an Air Quality Operating Permit for:

**Permitted Stationary Sources:** Diesel Electric Generating Stations with diesel engines and auxiliary fuel burning equipment that have requested a fuel limit to avoid classification under 18 AAC 50.306.

This permit authorizes the operation of stationary sources for which the Department finds in writing:

- Emission units meets the criteria established on page 2 of this permit; and
- The Department has received a complete application. For the Department to find that the application is complete, the application must provide all of the information described in the application form issued with this permit for all emission units to be operated under this permit.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As required by AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this permit.

This permit becomes effective on July 7, 2005.

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John F. Kuterbach, Manager  
Air Permit Program

## Table of Contents

List of Abbreviations Used in this Permit .....	3
Section 1. Qualifying Criteria.....	4
Section 2. Fee Requirements.....	5
Section 3. Emission Unit-Specific Requirements .....	6
Section 4. Stationary Source-Wide Requirements.....	9
Section 5. Insignificant Emission Units.....	11
Section 6. Generally Applicable Requirements .....	12
Section 7. General Source Testing and Monitoring Requirements.....	15
Section 8. General Recordkeeping, Reporting, and Compliance Certification Requirements	17
Section 9. Standard Conditions Not Otherwise Included in the Permit.....	21
Section 10. Visible Emissions and Particulate Matter Monitoring Plan.....	24
Section 11. Visible Emission Records.....	30
Visible Emissions Field Data Sheet.....	30
Visible Emissions Observation Record .....	31
Section 12. ADEC Notification Form.....	32
Section 13. Semiannual Operating Report Form .....	35
Section 14. Annual Compliance Certification Form.....	37
Section 15. Emission Calculations for Emission Fees.....	40

## List of Abbreviations Used in this Permit

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AP-42	EPA report, Compilation of Air Pollutant Emission Factors
AS	Alaska Statutes
ASTM	American Society for Testing and Materials
bhp	boiler horsepower
C.F.R.	Code of Federal Regulations
dscf	Dry standard cubic foot
EPA	US Environmental Protection Agency
gr./dscf	grain per dry standard cubic foot (1 pound = 7000 grains)
gpy	gallons per year
HAPs	Hazardous Air Pollutants [ <i>HAPs</i> as defined in AS 46.14.990(14)]
ID	Emission Unit Identification Number
MMBtu/hr	Million British Thermal Units per hour
MR&R	Monitoring, recordkeeping, and reporting
NESHAPs	Federal National Emission Standards for Hazardous Air Pollutants [ <i>NESHAPs</i> as contained in 40 C.F.R. 61 and 63]
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards [ <i>NSPS</i> as contained in 40 C.F.R. 60]
O & M	Operation and Maintenance
O <sub>2</sub>	Oxygen
PM-10	Particulate Matter less than 10 microns in diameter
ppm	Parts per million
ppmv, ppmvd	Parts per million by volume on a dry basis
psia	Pounds per Square Inch (absolute)
PSD	Prevention of Significant Deterioration
RM	Reference Method
S	Sulfur
PTE	Potential to Emit
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur dioxide
TPY	tons per year
VOC	volatile organic compound [ <i>VOC</i> as defined in 18 AAC 50.990(121)]
wt percent	weight percent

## **Section 1. Qualifying Criteria**

A stationary source may operate under this general operating permit if the stationary source:

- is described by SIC code 4911 or 4931;
- produces electricity using diesel engines;
- is capable of emitting 100 TPY of NO<sub>x</sub> (burning more than 330,000 gallons in 12 consecutive months);
- will actually emit less than 250 TPY of NO<sub>x</sub> (burning no more than 825,000 gallons of fuel in any 12 consecutive months);
- requests a limit to restrict NO<sub>x</sub> emissions to less than 250 tons in any 12 consecutive months;
- obtained all required air quality permits when the stationary source was built or modified;
- complies with the emission standards in this permit at the time of application;
- is not subject to an existing stationary source-specific requirement, other than a fuel use limit, established in a construction permit or in a permit issued before January 18, 1997;
- is not subject to a fuel-use limit that ensures compliance with ambient air quality standards;
- was not built after January 18, 1997 in a sulfur dioxide special protection area;
- does not conduct open burning; and
- does not contain any of the following emission units:
  - boilers subject to 40 C.F.R. 60, Subparts D, Da, Db, or Dc;
  - fuel storage tanks subject to 40 C.F.R. 60, Subparts K, Ka, or Kb;
  - emission units subject to any other federal emission standard in 40 C.F.R. 60, 61, or 63 other than a woodstove for space heating or an asbestos demolition /renovation project;
  - gas turbines;
  - incinerators subject to any federal emission standard in 40 C.F.R. 60 or 62; or
  - emission units subject to any standard in 18 AAC 50.055(a) – (f) other than the general standards for fuel burning equipment in (a)(1), (b)(1), and (c).

## **Section 2. Fee Requirements**

**1. Assessable Emissions.** The Permittee shall pay to the Department annual emission fees based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of:

- 1.1 the stationary source's assessable potential to emit of 369.2 TPY; or
- 1.2 the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the Department, when demonstrated by:
  - a. an enforceable test method described in 18 AAC 50.220;
  - b. material balance calculations;
  - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035 as set out in the emission fee form in Section 15; or
  - d. other methods and calculations approved by the Department.

[18 AAC 50.346(b)(1), 8/25/04; 18 AAC 50.326(a), 10/1/04; and 18 AAC 50.410 – 50.420, 1/29/05]  
[40 C.F.R. 71.5(c)(3)(ii), 7/1/03]

**2. Assessable Emissions Estimates.** Emission fees will be assessed as follows:

- 2.1 no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates, unless using the emission fee form in Section 15; or
- 2.2 if no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in condition 1.1.

[18 AAC 50.346(b)(1), 5/3/02; 18 AAC 50.326(a), 10/1/04; and 18 AAC 50.410 – 50.420, 1/29/05]

### **Section 3. Emission Unit-Specific Requirements**

#### Fuel Burning Equipment & Industrial Process Standards

**3. Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from diesel engines to reduce visibility through the exhaust effluent by any of the following:

a. More than 20 percent for more than three minutes in any one hour.<sup>1</sup>

[18 AAC 50.055(a)(1), 1/18/97]  
[40 C.F.R. 52.70, 7/1/03]

b. More than 20 percent averaged over any six consecutive minutes.<sup>2</sup>

[18 AAC 50.055(a)(1), 5/3/02 & 18 AAC 50.346(c), 10/1/04]

3.1 Monitor, record and report according to Section 10.

[18 AAC 50.326(a), 10/1/04]  
[40 C.F.R. 71.2 and 71.6(a)(3), 7/1/03]

**4. Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from diesel engines to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97 & 18 AAC 50.346(c), 10/1/04]

4.1 Monitor, record and report according to Section 10.

[18 AAC 50.326(a), 10/1/04]  
[40 C.F.R. 71.2 and 71.6(a)(3), 7/1/03]

**5. Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO<sub>2</sub>, from diesel engines to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97 & 18 AAC 50.346(c), 10/1/04]

5.1 Comply with this condition by using fuel with a sulfur content of less than 0.5 percent by weight.

5.2 The Permittee shall do one of the following for each shipment of fuel:

a. if the fuel grade requires a sulfur content less than 0.5 percent by weight, keep receipts that specify fuel grade and amount; or

b. if the fuel grade does not require a sulfur content less than 0.5 percent by weight, keep receipts that specify fuel grade and amount, and

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<sup>1</sup> For purposes of this permit, the “more than three minutes in any one hour” criterion in this condition and condition 10 will no longer be effective when the revisions to 18 AAC 50 dated 5/3/02 are adopted by EPA.

<sup>2</sup> The six-minute average standard is enforceable only by the state until the revisions to 18 AAC 50 dated 5/3/02 are adopted into the State Implementation Plan (SIP), at which time it will also be federally enforceable.

- (i) test the fuel for sulfur content; or
  - (ii) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent.
- 5.3 Fuel testing under condition 5.1 must follow an appropriate method listed in 18 AAC 50.035 or another method approved in writing by the Department.
- 5.4 Report as set out by condition 34 any time the sulfur content of a fuel shipment exceeds 0.5 percent by weight.
- 5.5 Include with the Operating Report required by condition 35:
- (i) a list of the fuel grades received at the stationary source during the reporting period; and
  - (ii) for any fuel grade with a maximum sulfur content greater than 0.5 percent sulfur, the fuel sulfur content of each shipment.

[18 AAC 50.326(a), 50.346(c), 10/1/04]  
[40 C.F.R. 71.2 and 71.6(a)(1 & 3), 7/1/03]

**6. Used Oil in Diesel Engines.** Except for emission testing purposes, the Permittee is prohibited from burning used oil blends in diesel engines until the Department approves of a source test demonstrating that burning the used oil will comply with the particulate matter emission standard of condition 4 and the visible emission standard of condition 3.

- 6.1 After Department approval as set out by condition 6, the Permittee shall comply with the following<sup>3</sup>:
- 6.2 Analyze each batch of used oil to determine the sulfur content using an approved ASTM method such as ASTM D975-84, D3120-92, D4152-90, D2622-91, ASTM 396-92, and ASTM D2820-94. Maintain records showing the results of each analysis.
- 6.3 Blend the used oil with virgin oil at a ratio that will ensure compliance with the sulfur limit of condition 5.1. However, the used oil blend shall be mixed at a ratio of no more than tested as set out by condition 6.
- 6.4 Account for the consumption of used oil blends as set out according to condition 8.2.
- 6.5 Include with the Operating Report required by condition 35:
- a. Results of each analysis as set out by condition 6.1; and

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<sup>3</sup> CAUTION! Although this condition should ensure compliance with the applicable emission standards of 18 AAC 50, this permit does NOT ensure compliance with other applicable state or federal laws concerning management, use, or disposal of used oil.

- b. For each batch of used oil blended, the amounts of virgin oil and used oil; the blend ratio; the final sulfur content; and the blend date.

- 6.6 Report as set out by condition 34 any time the blend ratio or other requirements deviate from condition 6.

[18 AAC 50.326(a), 10/1/04]  
[40 C.F.R. 71.2 and 71.6(a)(1 & 3), 7/1/03]

**7. Used Oil in Boilers or Heaters.** The Permittee may burn used oil blends in the boilers and heaters as follows<sup>4</sup>:

- 7.1 Analyze each batch of used oil to determine the sulfur content using an approved ASTM method such as ASTM D975-84, D3120-92, D4152-90, D2622-91 and ASTM 396-92. Maintain records showing the results of each analysis.
- 7.2 Blend the used oil with virgin oil at a ratio that will ensure compliance with the sulfur limit of condition 5.1. However, the used oil blend shall be mixed at a ratio of no more than 1 part used oil with 6 parts virgin oil, unless the Permittee provides a Department approved demonstration that a greater ratio will comply with the limit in condition 4.
- 7.3 Account for the consumption of the used oil blends as set out according to condition 8.2.
- 7.4 Include with the Operating Report required by condition 35:
  - a. Results of each analysis as set out by condition 7.1; and
  - b. For each batch of used oil blended, the amounts of virgin oil and used oil; the blend ratio; the final sulfur content; and the blend date.
- 7.5 Report as set out by condition 34 any time the blend ratio or other requirements deviate from conditions 7.1 to 7.4.

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<sup>4</sup> CAUTION! Although this condition should ensure compliance with the applicable emission standards of 18 AAC 50, this permit does NOT ensure compliance with other applicable state or federal laws concerning management, use, or disposal of used oil.

#### **Section 4. Stationary Source-Wide Requirements**

**8. NOx PSD Avoidance:** The Permittee shall avoid the requirement of a PSD review for NOx by emitting less than 250 tons in any 12 consecutive months, as follows:

8.1 Limit fuel consumption from the stationary source (diesel engines and auxiliary fuel burning equipment, including insignificant emission units) to no more than 825,000 gallons in any 12 consecutive month period.

8.2 Monitor as follows:

- a. At a consistent time each month, monitor and record the total monthly fuel consumption<sup>5</sup> at the stationary source using a tank leveling process, fuel delivery records, or a metering system.
- b. Calculate and record the 12 consecutive month total fuel consumption for the stationary source each month.

8.3 Report as follows:

- a. Report in the Operating Report in accordance condition 35, the 12 consecutive month fuel consumption for each month in the reporting period as set out by condition 8.2b.
- b. Report in accordance with condition 34, whenever the limit in condition 8.1 is exceeded and whenever the monitoring and reporting of conditions 8.2 or 8.3 are deviated.

8.4 Source Testing. Conduct a one-time NOx emission source test when the fuel consumption of the stationary source reaches 750,000 gallons in any 12 consecutive months to confirm the worst case emission factors are equal to or less than 4.41 lb/MMBtu. The source test shall be conducted as follows:

- a. Test each diesel engine rated at greater than 400 hp at no less than three loads (high, mid, and low) within the normal operating range of the units. If the Permittee proves that units have identical configuration, the Department will allow one unit to be tested within that group;
- b. The source test shall be conducted within 90 days after reaching the fuel trigger;
- c. The source test shall be in accordance with the requirements set forth in Section 7 of this permit;
- d. During each test, monitor and record the units' load, electric generation rate, and fuel consumption no less than once every five minutes;

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<sup>5</sup> Fuel consumption shall include used oil consumption as set out by conditions 6.4 and 7.3.

- e. Obtain for each fuel used during the testing, the fuel specific high heating value (gross heat value) or analyze a representative sample of the fuel using an approved ASTM method such as ASTM D 240, 4809 or 2382;
- f. Determine the load specific NO<sub>x</sub> emission factors (pounds per gallon, pounds per hour, and lb/MMBtu) expressed as NO<sub>2</sub>, using exhaust properties determined by both Method 19 and exhaust gas measurements;
- g. Report information obtained in conditions 8.4a through 8.4f in the source test report required in Section 7.

[18 AAC 50.326(a), 10/1/04]  
[40 C.F.R. 71.2 and 71.6(a)(1 & 3), 7/1/03]

## **Section 5. Insignificant Emission Units**

This section contains the requirements of insignificant emission units<sup>6</sup> as set out under 18 AAC 50.326(d)(2). This section also specifies the testing, monitoring, recordkeeping, and reporting for insignificant units that the Department finds necessary to ensure compliance with the applicable requirements. Insignificant units are not exempted from any air quality control requirement or federally enforceable requirement.

9. For emission units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply:
  - 9.1 The Permittee shall submit the compliance certifications of condition 36 based on reasonable inquiry;
  - 9.2 The Permittee shall comply with the requirements of condition 19;
  - 9.3 The Permittee shall report in the Operating Report required by condition 35 if an emission unit is insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and actual emissions become greater than any of those thresholds;
  - 9.4 No other monitoring, recordkeeping or reporting is required.

[18 AAC 50.346(b)(4), 10/1/04]
10. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by any of the following:
  - 10.1 more than 20 percent for a total of more than three minutes in any one hour<sup>7</sup>;

[18 AAC 50.050(a)(2) & 50.055(a)(1), 1/18/97 and 40 C.F.R. 52.70, 7/01/03]
  - 10.2 more than 20 percent averaged over any six consecutive minutes<sup>8</sup>.

[18 AAC 50.055(a)(1), 5/03/02]
11. The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]
12. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO<sub>2</sub>, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

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<sup>6</sup> A diesel engine is insignificant if it emits less than 2 TPY NO<sub>x</sub> (burns less than 6,600 gallons per 12 consecutive months). A heater or boiler is insignificant if it has a heat input rating less than 1.7 MMBtu/hr for burning kerosene, No. 1 fuel oil, or No. 2 fuel oil or has a heat input rating less than 0.3 MMBtu/hr for burning used oil.

<sup>7</sup> See Footnote 1.

<sup>8</sup> See Footnote 2.

## **Section 6. Generally Applicable Requirements**

- 13. Asbestos NESHAP.** The Permittee shall comply with the requirements set forth in 40 C.F.R. §61.145, §61.150, and §61.152, and the applicable sections set forth in 40 C.F.R. §61, Subpart A and Appendix A.

[18 AAC 50.040(b)(2)(F), 10/1/04]  
[40 C.F.R. 61, Subparts A & M, and Appendix A, 7/1/03]

- 14. Good Air Pollution Control Practice.** The Permittee shall do the following for all diesel engines:

- 14.1 perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
- 14.2 keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and
- 14.3 keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.030, 50.346(b)(5), & 50.326(j)(5), 10/1/04]

- 15. Dilution.** The Permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a) 1/18/97]

- 16. Reasonable Precautions to Prevent Fugitive Dust.** A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.

16.1 The Permittee shall keep records of:

- a. complaints received by the Permittee and complaints received by the Department and conveyed to the Permittee; and
- b. any additional precautions that are taken:
- (i) to address complaints described in condition 16.1a or to address the results of Department inspections that found potential problems; and
- (ii) to prevent future dust problems.

16.2 The Permittee shall report according to condition 19.

[18 AAC 50.346(c), 50.045(d), & 50.040(e), 10/1/04]

**17. Stack Injection.** The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.

[18 AAC 50.055(g), 10/1/04]

**18. Open Burning.** The Permittee shall not open burn at the stationary source.

[18 AAC 50.065, 1/18/97; and 18 AAC 50.040(j) & 50.326(j), 10/1/04]

[40 C.F.R. 71.6(a)(3), 7/1/03]

**19. Air Pollution Prohibited.** No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 5/26/72; 18 AAC 50.040(e) & 50.346(a), 10/1/04]

- 19.1 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to condition 34.
- 19.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of condition 19.
- 19.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if
- a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of condition 19; or
  - b. the Department notifies the Permittee that it has found a violation of condition 19.
- 19.4 The Permittee shall keep records of:
- a. the date, time, and nature of all emissions complaints received;
  - b. the name of the person or persons that complained, if known;
  - c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of condition 19; and
  - d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.
- 19.5 With each stationary source Operating Report under condition 35, the Permittee shall include a brief summary report which must include:

- a. the number of complaints received;
- b. the number of times the Permittee or the Department found corrective action necessary;
- c. the number of times action was taken on a complaint within 24 hours; and
- d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

19.6 The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

[18 AAC 50.346(a) & 50.326(a), 10/1/04]  
[40 C.F.R. 71.6(a)(3), 7/1/03]

**20. Permit Renewal.** To renew this permit, the Permittee shall submit a complete application under 18 AAC 50.326(a) no sooner than **December 6, 2008** and no later than **December 6, 2009**. If a timely and complete application for renewal of an operating permit is submitted to the Department, the existing permit does not expire until the renewal permit has been issued or denied.

[18 AAC 50.040(j)(3) and 50.326(c)(2) & (j)(2), 10/1/04]  
[40 CFR 71.5(a)(iii) and 71.7(c)(1), 7/1/03]

## **Section 7. General Source Testing and Monitoring Requirements**

- 21. Requested Source Tests.** In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a), 1/18/97 & 18 AAC 50.345(a) & (k), 5/03/02]

- 22. Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing:

22.1 At a point or points that characterize the actual discharge to into the ambient air; and

22.2 At the maximum rated burning or operating capacity of the unit or another rate determined by the Department to characterize the actual discharge into the ambient air.

[18 AAC 50.220(b), 1/18/97]

- 23. Reference Test Methods.** The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

23.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. §60.

[18 AAC 50.220(c)(1)(A), 1/18/97 & 18 AAC 50.040(a), 10/1/04]  
[40 C.F.R. 60, 7/1/03]

23.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. §61.

[18 AAC 50.040(b), 10/1/04 & 18 AAC 50.220(c)(1)(B), 1/18/97]  
[40 C.F.R. 61, 7/1/03]

23.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. §63.

[18 AAC 50.040(c), 10/1/04 & 18 AAC 50.220(c)(1)(C), 1/18/97]  
[40 C.F.R. 63, 7/1/03]

Source testing for the reduction in visibility through the exhaust effluent must be conducted as set out in Reference Method 9 and may use the forms in Section 11 to record data.

[18 AAC 50.030, 10/1/04 & 18 AAC 50.220(c)(1)(D), 1/18/97]

23.4 Source testing for emissions of particulate matter, sulfur compounds, and nitrogen compounds must be conducted in accordance with the methods and procedures specified 40 C.F.R. §60, Appendix A.

[18 AAC 50.040(a)(4), 10/1/04; & 18 AAC 50.220(c)(1)(E), 1/18/97]  
[40 C.F.R. 60, Appendix A, 7/1/03]

- 23.5 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. §51, Appendix M.  
[18 AAC 50.035(b)(2), 10/1/04; & 18 AAC 50.220(c)(1)(F), 1/18/97]  
[40 C.F.R. 51, Appendix M, 7/1/03]
- 23.6 Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with Method 301 in Appendix A to 40 C.F.R. §63.  
[18 AAC 50.040(c)(19), 10/1/04 & 18 AAC 50.220(c)(2), 1/18/97]  
[40 C.F.R. 63, Appendix A, Method 301, 7/1/03]
- 24. Excess Air Requirements.** To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 68°F and an absolute pressure of 760 millimeters of mercury).  
[18 AAC 50.220(c)(3), 1/18/97; & 18 AAC 50.990(102), 10/1/04]
- 25. Test Exemption.** The Permittee is not required to comply with conditions 27, 28, or 29 when the exhaust is observed for visible emissions by Method 9 Plan or Smoke/No Smoke Plan.  
[18 AAC 50.345(a), 5/03/02]
- 26. Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.  
[18 AAC 50.345(a) & (l), 5/03/02]
- 27. Test Plans.** Before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the unit will operate during the test and how the Permittee will document this operation. A complete plan must be submitted within 60 days of receiving a request under condition 8.4 or 21 and at least 30 days before the scheduled date of any tests.  
[18 AAC 50.345(a) & (m), 5/03/02]
- 28. Test Notification.** At least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and time the source test will begin.  
[18 AAC 50.345(a) & (n), 5/03/02]
- 29. Test Reports.** Within 45 days after completing a source test, the Permittee shall submit two copies of the results, to the extent practical, in the format set out in the *Source Test Report Outline* of Volume III, Section IV.3 of the State Air Quality Control Plan, adopted by reference in 18 AAC 50.030(8). The Permittee shall certify the results as set out in condition 30 of this permit.  
[18 AAC 50.345(a) & (o), 5/03/02]

## **Section 8. General Recordkeeping, Reporting, and Compliance Certification Requirements**

**30. Certification.** The Permittee shall certify all reports, compliance certifications, or other documents submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or within an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

30.1 The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if:

- a. a certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and
- b. the person providing the electronic signature has made an agreement, with the certifying authority described in condition 30.1, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

[18 AAC 50.345(a) & (j), 5/3/02; 18 AAC 50.205 & 50.326(j), 10/1/04]  
[40 C.F.R. 71.6(a)(3)(iii)(A), 7/1/03]

**31. Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send two copies of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with condition 30.

[18 AAC 50.326(a), 10/1/04]  
[40 C.F.R. 71.6(a)(3)(iii)(A), 7/1/03]

**32. Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by this permit. The Department, in its discretion, will require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.345(a) & (i), 5/3/02; 18 AAC 50.200 & 50.326(a), 10/1/04]  
[40 C.F.R. 71.5(a)(2) & 71.6(a)(3), 7/1/03]

**33. Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including

- 33.1 Copies of all reports and certifications submitted pursuant to this section of this permit.
- 33.2 Records of all monitoring required by this permit, and information about the monitoring, including:
- a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;
  - b. sampling dates and times of sampling and measurements;
  - c. the operating conditions that existed at the time of sampling or measurement;
  - d. the date analyses were performed;
  - e. the location where samples were taken;
  - f. the company or entity that performed the sampling and analyses;
  - g. the analytical techniques or methods used in the analyses; and
  - h. the results of the analyses.

[18 AAC 50.326(a), 10/1/04]  
[40 C.F.R. 60.7(f), Subpart A and §71.6(a)(3)(ii)(B), 7/1/03]

**34. Excess Emission and Permit Deviation Reports.**

- 34.1 Except as provided in condition 19, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:
- a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report
    - (i) emissions that present a potential threat to human health or safety; and
    - (ii) excess emissions that the Permittee believes to be unavoidable;
  - b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;
  - c. report all other excess emissions and permit deviations
    - (i) within 30 days of the end of the month in which the emissions or deviation occurs or is discovered, except as provided in condition 34.1c(ii) or 34.1c(iii);

- (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under condition 34.1c(i); and
- (iii) for failure to monitor, as required by other applicable conditions in this permit.

34.2 The Permittee must report using either the Department's on-line form, or if the Permittee prefers, the form contained in Section 12 of this permit. The Permittee must provide all information called for by the form that is used.

34.3 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.235(a)(2), 50.240(c), & 50.326(j)(3), & 50.346(b)(2), 10/1/04]

**35. Operating Reports.** During the life of this permit, the Permittee shall submit an original and two copies of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

35.1 The operating report must include all information required to be in operating reports by other conditions of this permit, as set out by the form in Section 13.

35.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 35.1, either

a. the Permittee shall identify

- (i) the date of the deviation;
- (ii) the equipment involved;
- (iii) the permit condition affected;
- (iv) a description of the excess emissions or permit deviation; and
- (v) any corrective action or preventive measures taken and the date or dates of such actions; or

b. when excess emissions or permit deviations have already been reported under condition 34, the Permittee may cite the date or dates of those reports.

35.3 The operating report must include a listing of emissions monitored under condition(s) 49.1e and 49.2b which trigger additional testing or monitoring, and whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report:

a. the date of the emissions;

- b. the equipment involved;
- c. the permit condition affected; and
- d. the monitoring result which triggered the additional monitoring.

[18 AAC 50.346(b)(6) & 50.326(a), 10/1/04]  
[40 C.F.R. 71.6(a)(3)(iii)(A), 7/1/03]

**36. Annual Compliance Certification.** Each year by March 31, the Permittee shall compile and submit to the Department one original and one copy of an annual compliance certification report, as set out by the form in Section 14, as follows:

36.1 Certify the compliance status of the stationary source over the preceding calendar year consistent with the monitoring required by this permit, as follows:

- a. identify each term or condition set forth in Section 2 through Section 8, that is the basis of the certification;
- b. briefly describe each method used to determine the compliance status;
- c. state whether compliance is intermittent or continuous; and
- d. identify each deviation and take it into account in the compliance certification.

36.2 In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.205 & 50.326(j), 10/1/04 & 50.345(a) & (j), 5/03/02]  
[40 C.F.R. 71.6(c)(5), 7/1/03]

**Section 9. Standard Conditions Not Otherwise Included in the Permit**

**37.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are:

37.1 included and specifically identified in the permit; or

37.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (b), 5/03/02]

**38.** The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for:

38.1 an enforcement action;

38.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

38.3 denial of an operating-permit renewal application.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (c), 5/03/02]

**39.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (d), 5/03/02]

**40.** Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (e), 5/03/02]

**41.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (f), 5/03/02]

**42.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (g), 5/03/02]

**43.** The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to:

43.1 enter upon the premises where a emission unit subject to the permit is located or where records required by the permit are kept;

43.2 have access to and copy any records required by the permit;

- 43.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and
- 43.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (h), 5/03/02]

- 44. Emissions Trading:** No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.

[18 AAC 50.040(j)(4) and 50.326(j), 10/1/04]  
[40 C.F.R. 71.6(a)(8), 7/1/03]

- 45. Off Permit Changes.** The Permittee may make changes that are not addressed or prohibited by this permit, other than those subject to the requirements of 40 C.F.R. 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met:

- 45.1 Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;
- 45.2 Provide contemporaneous written notice to the Department (and EPA, in the case of a program delegated pursuant to 40 C.F.R. 71.10) of each such change, except for changes that qualify as insignificant under 18 AAC 50.326(d) – (i). Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change;
- 45.3 The change shall not qualify for the shield under 40 C.F.R. 71.6(f); and
- 45.4 The Permittee shall keep a record describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

[18 AAC 50.040(j)(4) and 50.326(j), 10/1/04]  
[40 C.F.R. 71.6(a)(12), 7/1/03]

- 46. Operational Flexibility.** The Permittee may make changes within the stationary source without requesting for a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions):

- 46.1 Provided that the Permittee provides the Department (and EPA, in the case of a program delegated pursuant to 40 C.F.R. 71.10) with written notification at least seven days in advance of the proposed change.
- 46.2 The Permittee shall follow the applicable notification requirements provided in 40 C.F.R. 71.6(a)(13)(i) – (iii).

46.3 The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made under 40 C.F.R. 71.6(a)(13)(i).

[18 AAC 50.040(j)(4) and 50.326(j), 10/1/04]  
[40 C.F.R. 71.6(a)(13), 7/1/03]

**47. Construction of a New Major Stationary Source or Major Modification.** An owner or operator must obtain a construction permit before beginning actual construction of a new major stationary source, a major modification, a PAL major modification, or a new stationary source or modification subject to the construction permitting requirements of 42 U.S.C. 7412(i) (Clean Air Act sec. 112(i)).

[18 AAC 50.302, 10/1/04]

**48. Transfer of Ownership.** The Permittee may apply for a transfer or ownership to change the ownership or operational control of a stationary source by providing to the Department a written agreement containing a specific date for the transfer or permit responsibility, coverage, and liability between the current and new Permittee.

[18 AAC 50.040(j)(4) and 50.326(c)(2) & (j)(2), 10/1/04]  
[40 C.F.R. 71.5(a)(iii) and 71.7(c)(1), 7/1/03]

## **Section 10. Visible Emissions and Particulate Matter Monitoring Plan<sup>9</sup>**

**49. Visible Emissions Monitoring.** The Permittee shall observe the exhaust of each diesel engine and auxiliary fuel burning equipment for visible emissions using either the Method 9 Plan under condition 49 or the Smoke/No-Smoke Plan under condition 49.1e. The Permittee may change visible-emissions plans for an emission unit at any time unless prohibited from doing so by condition 49.2c.

**49.1 Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.

- a. First Method 9 Observation. Observe exhaust for 18 minutes within 6 months after the issue date of this permit and 14 calendar days after changing from the Smoke/No-Smoke Plan of condition 49.1e.
- b. Monthly Method 9 Observations. After the first Method 9 observation, perform 18-minute observations at least once in each calendar month that an emission unit operates.
- c. Semiannual Method 9 Observations. After observing emissions for three consecutive operating months under condition 49.1b, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, observe emissions at least semiannually for 18 minutes.

Semiannual observations must be taken between four and seven months after the previous set of observations.

- d. Annual Method 9 Observations. After at least two semiannual 18-minute observations, unless a six-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, observe emissions at least annually.

Annual observations must be taken between 10 and 13 months after the previous observations and must include at least three 6-minute sets of observations.

- e. Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that emission unit to at least monthly intervals, until the criteria in condition 49.1c for semiannual monitoring are met.

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<sup>9</sup> Insignificant emission units are not subject to this section. See Footnote 6 for the definition of an insignificant emission unit.

49.2 **Smoke/No Smoke Plan.** Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor.

- a. Initial Monitoring Frequency. Observe the exhaust during each calendar day that an emission unit operates.
- b. Reduced Monitoring Frequency. After the emission unit has been observed on 30 consecutive operating days, if the emission unit operated without visible smoke in the exhaust for those 30 days, then observe emissions at least once in every calendar month that an emission unit operates.
- c. Smoke Observed. If smoke is observed, either begin the Method 9 Plan of condition 49 or perform the corrective action required under condition 49.2c.

49.3 **Corrective Actions Based on Smoke/No Smoke Observations.** If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke Plan of condition 49.1e, then the Permittee shall either follow the Method 9 plan of condition 49 or

- a. initiate actions to eliminate smoke from the emission unit within 24 hours of the observation;
- b. keep a written record of starting date, the completion date, and a description of the actions taken to reduce smoke; and
- c. after completing the actions required under condition 49.3a,
  - (i) take Smoke/No Smoke observations in accordance with condition 49.1e
    - (1) at least once per day for the next seven operating days and until the initial 30 day observation period is completed; and
    - (2) continue as described in condition 49.2b; or
  - (ii) if the actions taken under condition 49.3a do not eliminate the smoke, or if subsequent smoke is observed under the schedule of condition 49.3c(i), then observe the exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke Plan; after observing smoke and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under condition 49.2a.

**50. Visible Emissions Record Keeping.** The Permittee shall keep records in accordance with this condition 50.

50.1 If using the Method 9 Plan of condition 49,

- a. the observer shall record

- (i) the name of the stationary source, emissions unit and location, stationary source type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet in Section 11;
  - (ii) the time, estimated distance to the emissions location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;
  - (iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;
  - (iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Record in Section 11; and
  - (v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period;
- b. to determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet;
  - c. calculate and record the highest 18-consecutive-minute average observed.
- 50.2 If using the Smoke/No Smoke Plan of condition 49.1e, record the following information in a written log for each observation and submit copies of the recorded information upon request of the Department:
- a. the date and time of the observation;
  - b. the ID of the emission unit observed;
  - c. whether visible emissions are present or absent in the exhaust;
  - d. a description of the background to the exhaust during the observation;
  - e. if the emission unit starts operation on the day of the observation, the startup time of the emission unit;
  - f. name and title of the person making the observation; and
  - g. operating rate (load or fuel consumption rate).

**51. Visible Emissions Reporting.** The Permittee shall report visible emissions as follows:

51.1 include in each Operating Report under condition 35:

- a. which visible-emissions plan of condition 49 was used for each emission unit; if more than one plan was used, give the time periods covered by each plan;
- b. for each emission unit under the Method 9 Plan,
  - (i) copies of the observation results (i.e. opacity observations) for each emission unit that used the Method 9 Plan, except for the observations the Permittee has already supplied to the Department; and
  - (ii) a summary to include:
    - (1) number of days observations were made;
    - (2) highest six-minute average observed; and
    - (3) dates when one or more observed six-minute averages were greater than 20 percent;
- c. for each emission unit under the Smoke/No Smoke Plan, the number of days that Smoke/No Smoke observations were made and which days, if any, that smoke was observed; and
- d. a summary of any monitoring or record keeping required under conditions 49 and 50 that was not done;

51.2 report under condition 34:

- a. the results of Method 9 observations that exceed an average 20 percent for any six-minute period; and
- b. if any monitoring under condition 49 was not performed when required, report within three days of the date the monitoring was required.

**52. Particulate Matter Monitoring for Diesel Engines.** The Permittee shall conduct source tests on diesel engines to determine the concentration of particulate matter (PM) in the exhaust of an emission unit in accordance with this condition 52.

52.1 Within six months of exceeding the criteria of condition 52.2a or 52.2b, either

- a. conduct a PM source test according to Section 7; or

- b. make repairs so that emissions no longer exceed the criteria of condition 52.2; to show that emissions are below those criteria, observe emissions as described in condition 49 under load conditions comparable to those when the criteria were exceeded.

52.2 Conduct the test according to condition 52.1 if:

- a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or
- b. for an emission unit with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the Department has waived this requirement in writing.

52.3 During each one hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one hour test run. Submit a copy of these observations with the source test report.

52.4 The automatic PM source test requirement in condition 52.1 and 52.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

**53. Particulate Matter Record Keeping for Diesel Engines.** The Permittee shall record the exhaust stack diameters of each diesel engine.

**54. Particulate Matter Reporting for Diesel Engines.** The Permittee shall report as follows:

54.1 report under condition 34:

- a. the results of any PM source test that exceeds the PM emissions limit; or
- b. if one of the criteria of condition 52.2 was exceeded and the Permittee did not comply with either condition 52.1a or 52.1b, this must be reported by the day following the day compliance with condition 52.1 was required;

54.2 report observations in excess of the threshold of condition 52.2b within 30 days of the end of the month in which the observations occur;

54.3 in each Operating Report under condition 35, include:

- a. the dates, emission unit IDs, and results when an observed 18-minute average was greater than an applicable threshold in condition 52.2;
- b. a summary of the results of any PM testing under condition 52; and

- c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of condition 52.2, if they were not already submitted.

[18 AAC 50.346(c), 10/1/04]  
[18 AAC 50.326(a), 10/1/04]  
[40 C.F.R. 71.2 and 71.6(a)(3), 7/1/03]

## Section 11. Visible Emission Records

### Visible Emissions Field Data Sheet

Certified Observer: \_\_\_\_\_

Company &  
Stationary Source: \_\_\_\_\_

Location: \_\_\_\_\_

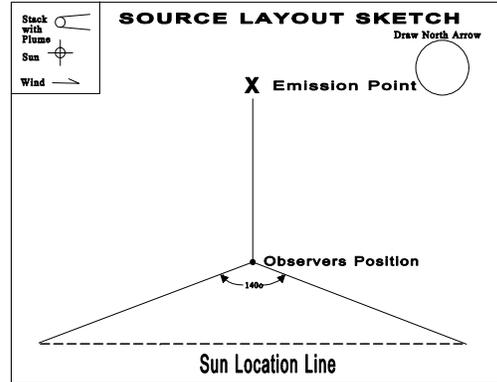
Test No.: \_\_\_\_\_ Date: \_\_\_\_\_

Emission Unit: \_\_\_\_\_

Production Rate/Operating Rate: \_\_\_\_\_

Unit Operating Hours: \_\_\_\_\_

Hrs. of observation: \_\_\_\_\_



Clock Time	Initial				Final
Observer location					
Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions					
Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description:					
Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					



**Section 12. ADEC Notification Form**

Stationary Source Name \_\_\_\_\_

Air Quality Permit Number \_\_\_\_\_

Company Name \_\_\_\_\_

**When did you discover the Excess Emissions/Permit Deviation?**

Date:        /        /        Time:        :

**When did the event/deviation?**

Begin: Date:        /        /        Time:        :        (please use 24hr clock)

End:    Date:        /        /        Time:        :        (please use 24hr clock)

**What was the duration of the event/deviation:**        :        (hrs:min) or        days  
(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

**Reason for notification:** (please check only 1 box and go to the corresponding section)

- Excess Emissions - Complete Section 1 and Certify
- Deviation from Permit Conditions - Complete Section 2 and Certify
- Deviation from COBC, CO, or Settlement Agreement - Complete Section 2 and Certify

**Section 1: Excess Emissions**

(a) Was the exceedance         Intermittent        or         Continuous

(b) Cause of Event (Check one that applies):

- Start Up/Shut Down         Natural Cause (weather/earthquake/flood)
- Control Equipment Failure         Scheduled Maintenance/Equipment Adjustments
- Bad fuel/coal/gas         Upset Condition         Other

(c) Description

Describe briefly what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emission Units Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

Unit ID	Unit Name	Permit Condition Exceeded/Limit/Potential Exceedance

(e) Type of Incident (please check only one):

- Opacity        %         Venting        (gas/scf)         Control Equipment Down
- Fugitive Emissions         Emission Limit Exceeded         Record Keeping Failure

- Marine Vessel Opacity     Failure to monitor/report     Flaring  
 Other:

(f) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?     YES     NO  
Do you intend to assert the affirmative defense of 18 AAC 50.235?     YES     NO

Certify Report (go to end of form)

**Section 2. Permit Deviations**

(a) Permit Deviation Type (check one only box, corresponding with the section in the permit)

- Emission Unit Specific  
 General Source Test/Monitoring Requirements  
 Recordkeeping/Reporting/Compliance Certification  
 Standard Conditions Not Included in Permit  
 Generally Applicable Requirements  
 Reporting/Monitoring for Diesel Engines  
 Insignificant Emission Units  
 Stationary Source Wide  
 Other Section:        (title of section and section number of your permit)

(b) Emission Unit Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding permit condition and the deviation.

Unit ID	Unit Name	Permit Condition /Potential Deviation

(c) Description of Potential Deviation:

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions:

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

**Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.**

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Phone Number: \_\_\_\_\_

**To Submit this Report:**

Fax to: 907-451-2187;

Email to: [airreports@dec.state.ak.us](mailto:airreports@dec.state.ak.us) - *if emailed, the report must be certified within the Operating Report required for the same reporting period per condition 30;*

Mail to: ADEC, Air Permits Program, 610 University Avenue, Fairbanks, AK 99709-3643;

Phone Notification: 907-451-5173 - *phone notifications require a written follow-up report within the deadline listed in condition 34; OR*

Online Submission: *(Website is not yet available) - if submitted online, the report must be certified within the Operating Report required for the same reporting period per condition 30.*

**Section 13. Semiannual Operating Report Form**

\_\_\_\_\_  
Stationary Source Name

\_\_\_\_\_  
Air Quality Permit Number

\_\_\_\_\_  
Company Name

**Operating Report for:**

- 1/1/\_\_\_\_ - 6/30/\_\_\_\_ Due on **August 1**, or
- 7/1/\_\_\_\_ - 12/31/\_\_\_\_ Due on **February 1 to ADEC.**

**Sulfur Content:** Complete the following table for each fuel delivery as set out by condition 5.5.

Date of Delivery	Fuel Grade	Fuel Sulfur Content, limited to 0.5%

**Blending with Used Oil:** Complete the following table when used oil is burned as set out by conditions 6 and 7. Attach results of each used oil analysis.

Date Blended	Used Oil Quantity	Fuel Oil Quantity	Equipment used for the Burn	Calculated Sulfur Content of Blend

**Fuel Consumption:** Complete the following table to track fuel (e.g., fuel oil and used oil) consumption for the stationary source per condition 8.3.

12 Month Period	Fuel Consumption, gallons per 12 month period

**Emission Complaints:** Complete the following table to track complaints received at the stationary source per condition 19.5.

Number of Complaints Received	Number of Times Corrective Action Necessary	Number of Times Action Taken within 24 hours	Status on Corrective Actions Found Necessary that were not Taken within 24 hours

**Excess Emission or Permit Deviations:** Complete the following table to track excess emissions or permit deviations within the reporting period per conditions 34 and 35.2, or attach copies of all ADEC Notification Forms pursuant to Section 12.

Not Yet Reported per Condition 34		Previously Reported per Condition 34	
Date of Deviations or Excess Emissions		Dates of Reported Excess Emission or Permit Deviations	
Equipment Involved			
Permit Conditions Affected			
Description of Excess Emissions or Permit Deviations			
Corrective Actions Taken and Dates of such Actions			
Date of anticipated submittal of the notification form pursuant to Section 12			

**Visible Emissions:** Complete the following table to track visible emissions per condition 51.1. Attach copies of all Method 9 readings.

Emission Unit Identification	Visible Emission Plan (list either Method 9 or smoke/no-smoke)	For Method 9 Readings		For Smoke/No-Smoke	
		Dates of Reading	Highest 6 Minute Averages	Dates of Readings	Smoke or No-Smoke

Certification:

**Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.**

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Responsible Official Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Section 14. Annual Compliance Certification Form**

Stationary Source Name \_\_\_\_\_

Air Quality Permit Number \_\_\_\_\_

Company Name \_\_\_\_\_

**Annual Compliance Certification for:**

1/1/\_\_\_ - 12/31/\_\_\_ Due on **March 31 to ADEC and EPA.**

Condition	Compliance Status	Continuous/ Intermittent	Method Used to Determine Compliance
1, Fees	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Fees paid upon billing <input type="checkbox"/> Fees not paid <input type="checkbox"/> Other (attach description & documentation)
2, Fees	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Fee Form Submitted ___/___/___ <input type="checkbox"/> Form Not Submitted <input type="checkbox"/> Other (attach description & documentation)
3, VE	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Smoke/No-smoke monitoring plan <input type="checkbox"/> Method 9 visual observation <input type="checkbox"/> Other (attach description & documentation)
4, PM	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Smoke/No-smoke monitoring plan <input type="checkbox"/> Method 5 source test <input type="checkbox"/> Other (attach description & documentation)
5, SO <sub>2</sub>	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Fuel grade/sulfur content records <input type="checkbox"/> Other (attach description & documentation)
6, used oil	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Method 5 source test & fuel sulfur content records <input type="checkbox"/> Other (attach description & documentation)
7, used oil	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Fuel grade/sulfur content records <input type="checkbox"/> Other (attach description & documentation)
8, NO <sub>x</sub>	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Fuel Records kept <input type="checkbox"/> Other (attach description & documentation)
9, insignificant units	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Records kept & reported <input type="checkbox"/> Other (attach description & documentation)
10, insignificant units VE	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Records kept <input type="checkbox"/> Other (attach description & documentation)
11, insignificant units PM	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Records kept <input type="checkbox"/> Other (attach description & documentation)
12, insignificant units SO <sub>2</sub>	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Records kept <input type="checkbox"/> Other (attach description & documentation)
13, asbestos	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Records kept and Reported <input type="checkbox"/> No asbestos demolition/renovation done <input type="checkbox"/> Other (attach description & documentation)

Condition	Compliance Status	Continuous/ Intermittent	Method Used to Determine Compliance
14, control practices	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Records kept <input type="checkbox"/> Other (attach description & documentation)
15, dilution	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> units do not allow for dilution of exhaust <input type="checkbox"/> units allow for dilution, but dilution not used during compliance tests <input type="checkbox"/> Other (attach description & documentation)
16, fugitive dust	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Records kept <input type="checkbox"/> Other (attach description & documentation)
17, stack injection	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Records kept <input type="checkbox"/> Other (attach description & documentation)
18, open burning	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> No burning conducted <input type="checkbox"/> Other (attach description & documentation)
19, air pollution	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Records kept & reported <input type="checkbox"/> Other (attach description & documentation)
20, permit renewal	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Renewal submitted <input type="checkbox"/> Other (attach description & documentation)
21, requested tests	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Test not requested <input type="checkbox"/> Test requested and conducted <input type="checkbox"/> Other (attach description & documentation)
22-24, source tests	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Test not conducted <input type="checkbox"/> Test conducted and records kept <input type="checkbox"/> Other (attach description & documentation)
25-29 source tests	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Test not conducted <input type="checkbox"/> Test conducted and reported <input type="checkbox"/> Other (attach description & documentation)
30, certification	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> reports are certified <input type="checkbox"/> reports are not certified <input type="checkbox"/> Other (attach description & documentation)
31, submittals	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> reports are submitted as directed <input type="checkbox"/> reports are not submitted as directed <input type="checkbox"/> Other (attach description & documentation)
32, information requests	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> No information requests <input type="checkbox"/> Information provided timely <input type="checkbox"/> Other (attach description & documentation)
33, records kept	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Records kept <input type="checkbox"/> Records not kept <input type="checkbox"/> Other (attach description & documentation)
34, excess emissions	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> No excess emissions or deviations generated <input type="checkbox"/> Excess emissions and deviation reports filed
35, operating reports	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> January through June Report submitted timely <input type="checkbox"/> July through December Report submitted timely

Condition	Compliance Status	Continuous/ Intermittent	Method Used to Determine Compliance
36, annual compliance	<input type="checkbox"/> In Compliance <input type="checkbox"/> Not in Compliance <input type="checkbox"/> Not Applicable	<input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input type="checkbox"/> Compliance Certification submitted to EPA and ADEC timely <input type="checkbox"/> Compliance Certification not submitted to EPA and ADEC timely

Certification:

**Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.**

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Responsible Official Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Section 15. Emission Calculations for Emission Fees**

Stationary Source Name \_\_\_\_\_

Air Quality Permit Number \_\_\_\_\_

Company Name \_\_\_\_\_

**Emission Fees Assessment Estimated from:**

1/1/\_\_\_\_ - 12/31/\_\_\_\_ Due on **March 31 to ADEC.**

Step 1: Use the following table to identify your emission factor, based on your yearly fuel consumption.

Fuel Consumption Range, gal/yr	Emission Factor, tons/gal
0 to 33,061	Zero
33,062 to 153,473	0.000302
153,474 to 288,712	0.000368
288,713 to 416,571	0.000402
416,572 to 470,322	0.000426
Over 470,322	0.000448

Step 2: Use the following table to calculate your emission fees.

Actual Fuel Consumption, gal/yr		Emission Factor, tons/gal		Emissions Estimate, tons/yr		Emission Fee Rate, \$/ton		Emission Fee, \$/yr
	x		=		x	\$12.52	=	

Certification:

**Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.**

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Responsible Official Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Alaska Department of Environmental Conservation**  
**Air Permits Program**  
**Final Draft**

**General Permit for**  
**Diesel Electric Generating Stations**

**STATEMENT OF BASIS**  
**of the terms and conditions for**  
**GP-A**

**Prepared by Jeanette Brena**  
**June 7, 2005**

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## INTRODUCTION

This document sets forth the legal and factual basis for the terms and conditions of the General Permit A (GP-A) for diesel electric generating stations with diesel engines and auxiliary fuel burning equipment.

## PROCESS DESCRIPTION

The GP-A regulates emissions from diesel-electric generating stations that have requested a fuel limit to avoid classification as Prevention of Significant Deterioration (PSD) major under 18 AAC 50.306. The stationary sources are described under SIC Codes 4911 and 4931.

Diesel-engine powered electric generators provide electric power for many communities in rural Alaska. These stationary sources have primary and backup generator sets to accommodate peak power demands, and to provide uninterrupted service during scheduled and unscheduled maintenance. Emission sources include diesel engines and auxiliary fuel burning equipment.

## QUALIFYING CRITERIA

1. Described by SIC codes 4911 and 4931 and produces electricity - this defines the group of stationary source.
2. The stationary source is classified under 18 AAC 50.326 - restricts the permit to those stationary sources that have the potential to emit at least 100 TPY.
3. Will not consume more than 825,000 gallons of fuel oil in any consecutive twelve months at the entire stationary source - ensures that emissions of NO<sub>x</sub> remain less than 250 TPY, and that the stationary source can comply with the permit.
4. Not subject to an existing stationary source-specific requirement, other than a fuel use limit - permit does not provide for compliance with these types of limits; ensures that stationary sources subject to BACT or LAER limits can not use the permit.
5. Not subject to a fuel-use limit that ensures compliance with ambient air quality standards - permit does not ensure compliance with ambient air quality standards; ensures that stationary sources that need a limit to comply with the AAQS cannot use the permit.
6. Was not built in a sulfur dioxide special protection area after January 18, 1997 - the permit does not protect ambient air quality from a new stationary source in an SO<sub>2</sub> special-protection area; this criterion prevents new stationary sources in an SO<sub>2</sub> special-protection area from using the permit.
7. Does not contain any boilers subject to 40 C.F.R. 60, Subparts D, Da, Db, or Dc; gas turbines; fuel storage tanks subject to 40 C.F.R. 60, Subparts K, Ka, or Kb; units subject to any other federal emission standard in 40 C.F.R. 60, 61, or 63 other than a woodstove for space heating or an asbestos demolition /renovation project; incinerators; or units subject to any standard in 18 AAC 50.055(a) – (f) other than the general standards for fuel burning equipment in (a)(1), (b)(1), and (c) - the permit does not include all the applicable

requirements for these units; therefore, stationary sources containing these sources may not use the permit.

8. Does not conduct open burning - the permit does not regulate open burning; therefore, stationary sources that open burn cannot use this permit.
9. The stationary source obtained all required air quality permits when the stationary source was built or modified - if a stationary source had not obtained required pre-construction/pre-modification permits, the stationary source would be in violation of these requirements. The operating permit would have to include a plan to bring the stationary source into compliance. Because this general permit does not include such a plan, stationary sources that require the compliance plan may not use the general permit.

### EMISSIONS

Section 2 of the GP-A contains emission information applicable to this permit. A summary of the potential to emit (PTE)<sup>10</sup> and assessable PTE is shown in the table below.

**Table A: Emissions (TPY)**

	<b>NO<sub>x</sub></b>	<b>SO<sub>2</sub></b>	<b>PM-10</b>	<b>VOC</b>	<b>CO</b>	<b>HAPs</b>	<b>Total</b>
Potential	249.5	28.6	17.5	19.8	53.8	0.2	369.2
Assessable	249.5	28.6	17.5	19.8	53.8	0	369.2

The assessable PTE listed under condition 1.1 is the sum of the emissions of each individual regulated air pollutant for which the stationary source has the potential to emit quantities greater than 10 TPY. The emissions listed in Table A are estimates that are for informational use only. The listing of the emissions does not create an enforceable limit to the stationary source.

Emissions of hazardous air pollutants (HAPs) are less than 10 TPY, estimated at 0.2 TPY. Therefore, the Department determined that these stationary sources are not subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines listed in 40 C.F.R. 63.

### BASIS FOR REQUIRING AN OPERATING PERMIT

Stationary sources operating under the GP-A require an operating permit because they have the potential to emit 100 TPY or more of a regulated air pollutant as set out by 18 AAC 50.326(a) and 40 C.F.R. 71.3(a)(5).

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<sup>10</sup> *Potential to Emit or PTE* means the maximum quantity of a release of an air pollutant, considering a stationary source's physical or operational design, based on continual operation of all emission units within the stationary source for 24 hours a day, 365 days a year, reduced by the effect of pollution control equipment and approved state or federal limitations on the capacity of the stationary source's emission units or the stationary source to emit an air pollutant, including limitations such as restrictions on hours or rates of operation and type or amount of material combusted, stored, or processed as defined in AS 46.14.990(21), effective 1/18/97.

These stationary sources avoid classification as PSD major as defined in 18 AAC 50.306 because its potential to emit is limited to less than 250 TPY of a regulated air pollutant in an area classified as attainment or unclassifiable.

Alaska regulations require operating permit applications to include identification of “regulated emission units.” As it applies to this stationary source, the state regulations require a description of:

- ⇒ Each emission unit regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel Burning Equipment, under 18 AAC 50.326(a); and
- ⇒ Emission units subject to requirements in an existing Department permit 18 AAC 50.326(a).

## LEGAL AND FACTUAL BASIS FOR THE PERMIT CONDITIONS

The state and federal regulations for each condition are cited in the GP-A.

### Conditions 1 - 2, Emission Fees

**Applicability:** The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

**Factual Basis:** These standard conditions require the Permittee to pay fees in accordance with the Department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The default assessable emissions are emissions of each air pollutant authorized by the permit (AS 46.14.250(h)(1)(A)). Air pollutant means any regulated air pollutant and any hazardous air pollutant. Therefore, assessable emissions under AS 46.14.250(h)(1)(A) means the **potential** to emit any air pollutant identified in the permit, including those not specifically limited by the permit. For example, hydrogen chloride (HCl) emissions from an incinerator are assessable emissions because they are a hazardous air pollutant, even if there is currently no emission limit on HCl for that class of incinerator.

The conditions also describe how the Permittee may calculate **actual** annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air pollutant. Therefore, fees based on actual emissions must also be paid on any pollutant emitted whether or not the permit contains any limitation of that pollutant.

This standard condition specifies that, unless otherwise approved by the Department, calculations of assessable emission based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the Department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match. The Permittee will normally pay for actual emissions - just with a one-year time lag.

Projected actual emissions may differ from the previous year's actual emissions if there is a change at the stationary source, such as changes in equipment or an emission rate from existing equipment.

If the Permittee does not choose to annually calculate assessable emissions, emissions fees will be based on PTE.

The following method was used to create the emission fee calculation chart for GP-A in Section 15, which can be used to calculate emission fees and actual emissions if elected by the Permittee. EPA publication AP-42 was consulted for emission factors for diesel engines. For emissions of NO<sub>x</sub>, CO, PM-10, and VOC, the Department used Table 3.3-1 for diesel engines up to 600 hp to be most conservative in the emission estimates. For emissions of SO<sub>2</sub>, the Department used Table 3.4-1 for diesel engines greater than 600 hp to be most conservative. Emission factors are as follows:

NO <sub>x</sub>	4.41 lb/MMBtu
CO	0.95 lb/MMBtu
SO <sub>2</sub>	0.51 lb/MMBtu
PM-10	0.31 lb/MMBtu
VOC	0.35 lb/MMBtu

On the form in Section 15, it is assumed that all fuel is consumed in the diesel engines, although small amounts may be burned in auxiliary fuel-burning equipment (e.g., boilers and heaters).

### **Condition 3 and Section 10, Visible Emission Standard**

**Applicability:** The regulation applies to operation of all fuel-burning equipment and industrial process equipment in Alaska. Diesel engines and auxiliary fuel-burning equipment are fuel-burning equipment.

**Factual Basis:** The condition re-iterates federal and state opacity standards applicable to fuel-burning equipment and industrial process equipment. The Permittee shall not cause or allow their equipment to violate these standards.

This condition has recently been adopted into regulation. The monitoring, recordkeeping, and reporting requirements are listed in Section 10 of the permit.

For liquid fired emission units, visible emissions may be observed by either Method-9 or the Smoke/No Smoke plans as detailed in Section 10. Corrective actions such as maintenance procedures and either more frequent or less frequent testing may be required depending on the results of the observations.

The Permittee is required to record the results of all visible emission observations and record any actions taken to reduce visible emissions.

The Permittee is required to report: 1) emission in excess of federal and state visible emission standard and 2) deviations from permit conditions. The Permittee is required to include copies of the results of all visible emission observations with the Operating Report.

### **Condition 4 and Section 10, PM Standard**

**Applicability:** The PM standard applies to operation of all fuel burning equipment and industrial process equipment in Alaska. Diesel engines and auxiliary fuel-burning equipment are fuel-burning equipment. The State Implementation Plan standard for PM applies to all fuel-burning equipment because it is contained in the federally approved SIP dated October 1983.

**Factual Basis:** The condition requires the Permittee to comply with the state PM (also called grain loading) standard applicable to fuel burning and industrial process equipment. The Permittee may not cause or allow their equipment to violate this standard.

MR&R requirements are listed in Section 10 of the permit.

For diesel engines, the Permittee is required to conduct PM source testing if threshold values for opacity are exceeded.

The Permittee is required to record the results of PM source tests.

The Permittee is required to report: 1) incidents when emission in excess of the opacity threshold values have been observed, and 2) results of PM source tests. The Permittee is required to include copies of the results of all visible emission observations with the Operating Report.

### **Condition 5, Sulfur Compound Emission Standard**

**Applicability:** The condition applies to operation of all fuel burning equipment and industrial process equipment in Alaska. Diesel engines and auxiliary fuel-burning equipment are fuel-burning equipment.

**Factual Basis:** The condition re-iterates a sulfur emission standard applicable to fuel-burning equipment. The Permittee may not cause or allow their equipment to violate this standard.

Sulfur dioxide comes from the sulfur in the liquid, hydrocarbon fuel (e.g. diesel or No. 2 fuel oil). Fuel containing no more than 0.75 percent sulfur by weight will always comply with the emission standard. The Department has imposed the standard condition adopted on October 1, 2004, modified to impose and monitor compliance with a 0.5 percent by sulfur limit.

For semi-annual operating reports, only a description of the fuel grades or sulfur content is needed, as well as excess emissions.

### **Condition 6, Used Oil in Engines**

**Applicability:** If the Permittee burns used oil in engines, then these requirements apply.

**Factual Basis:** These conditions set out the requirements for burning used oil in engines.

The Permittee is prohibited from burning used oil blends in the engines until the Department approves of a source test demonstrating that burning the used oil will comply with the particulate matter emission standard of condition 4 and the visible emission standard of condition 3.

Because of various metal pollutants, used oil may have higher particulate emissions and sulfur emissions than virgin fuel oil. Staff experience indicates that burning used oil by itself may violate 18 AAC 50.055(b)(1) and (c).

The Permittee shall remember that used oil is fuel that is limited and monitored as set out by condition 7. In addition, although this condition should ensure compliance with the applicable emission standards of 18 AAC 50, this permit does NOT ensure compliance with other applicable state or federal laws concerning management, use, or disposal of used oil

The permit lists blending, testing, recording, and reporting requirements. The Department added a requirement to blend at a ratio of no more than in the particulate matter source test, unless Department approved to mix at a greater ratio. However, the Permittee must still test for sulfur and ensure that the ratio of used oil with comply with the sulfur limit.

### **Condition 7, Used Oil in Boilers and Heaters**

**Applicability:** If the Permittee burns used oil in boilers and heaters, then these requirements may apply.

**Factual Basis:** This condition specifies requirements for burning used oil at the stationary source in only boilers and heaters.

The Permittee shall remember that used oil is fuel that is limited and monitored as set out by condition 7. In addition, although this condition should ensure compliance with the applicable emission standards of 18 AAC 50, this permit does NOT ensure compliance with other applicable state or federal laws concerning management, use, or disposal of used oil.

The permit lists blending, testing, recording, and reporting requirements. The Department added a requirement to blend at a ratio of no more than 1 part used oil with 6 parts virgin oil to comply with the particulate matter standard, unless Department approved to mix at a greater ratio. However, the Permittee must still test for sulfur and ensure that the ratio of used oil with comply with the sulfur limit.

### **Condition 8, NOx PSD Avoidance**

**Applicability:** These conditions are owner requested limits to avoid a PSD review for NOx.

**Factual basis:** Condition 8 limits emission of NOx to less than 250 TPY to avoid classification as PSD major. The limit is applicable to all emission units at the stationary source, including auxiliary equipment and insignificant emission units. If the stationary source were permitted to emit 250 TPY or more, it would be subject to PSD review which entails the imposition of best available control technology.

The Permittee shall monitor compliance with the TPY limit by limiting fuel consumption to 825,000 gallons in any 12 consecutive month period. Total fuel consumption must be tracked to ensure compliance with this limit. To simplify the monitoring process, the stationary source

does not track diesel engines fuel consumption separate from boilers or heater fuel consumption. Instead, all fuel is assumed to be consumed in the diesel engines, a conservative approach.

The Department calculated the amount of fuel that would result in the production of just under 250 tons of NO<sub>x</sub> based on AP-42 emission factors for a diesel engines. The Department used Table 3.3-1 for diesel engines up to 600 hp, because these factors were greater (worst-case) than using Table 3.4-1 for diesel engines greater than 600 hp. See calculations as follows:

Diesel fuel density assumed at 7.1 lbs/gallon  
Diesel fuel heating value assumed at 19,300 Btu/lb  
 $19300 \text{ Btu/lb} \times 7.1 \text{ lb/gal} = 137,030 \text{ Btu/gal}$   
 $1000000 \text{ Btu} / 137030 \text{ Btu/gal} = 7.29 \text{ gal/MMBtu}$   
AP-42 Emission Factor for NO<sub>x</sub> = 4.41 lb/MMBtu = 4.41 lb NO<sub>x</sub> / 7.29 gal

$4.41 \text{ lb NO}_x / 7.29 \text{ gal} = 250 \text{ ton} \times 2000 \text{ lb/ton} / X$   
 $X = 826,530 \text{ gal/year}$   
the fuel limit was set at 825,000 gallons per year.

The emission factors used to set this limit can be off by more than 10%. Therefore, condition 8 has the requirement to source test diesel engines rated greater than 400 hp to get accurate emission factors when the stationary source reaches exceeds 750,000 gallons per 12 months.

## Conditions 9 - 12, Insignificant Emission Units

**Applicability:** These general emission standards apply to all industrial processes fuel-burning equipment that are classified as insignificant.

**Factual Basis:** The conditions re-iterate the general standards and require compliance for insignificant emission units. The Permittee may not cause or allow their equipment to violate these standards. Insignificant emission units are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

The Department finds that the insignificant emission units at this stationary source do not need specific monitoring, recordkeeping and reporting to ensure compliance under these conditions.

Condition 9 requires certification that the emission units did not exceed state emission standards during the previous year and did not emit any prohibited air pollution. State air quality regulations adopted effective May 3, 2002 allow for an average six minute opacity observation. The existing regulation, limiting opacity to no more than 20 percent for more than 3 minutes in any one hour, is included because EPA Region X has not formally approved the changed opacity regulation as part of Alaska's State Implementation Plan (SIP).

Insignificant emission units operating under this permit may be diesel engines, heaters and boilers. A diesel engine is insignificant if it emits less than 2 TPY NO<sub>x</sub> (burns less than 6,600 gallons per 12 consecutive months). A heater or boiler is insignificant if it has a heat input rating less than 1.7 MMBtu/hr for burning kerosene, No. 1 fuel oil, or No. 2 fuel oil or has a heat input rating less than 0.3 MMBtu/hr for burning used oil.

### **Condition 13, Asbestos NESHAP**

**Applicability:** If the Permittee engages in asbestos demolition and renovation, then these requirements may apply.

**Factual Basis:** The condition cites and requires compliance with the regulations that will apply if the Permittee engages in asbestos demolition or renovation. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient.

### **Condition 14, Good Air Pollution Control Practices**

**Applicability:** Applies to all emission units.

**Factual Basis:** The condition requires the Permittee to comply with good air pollution control practices for all emission units.

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly than with appropriate maintenance. If appropriate maintenance is not applied to the equipment, the Department may have to apply more frequent periodic monitoring requirements (unless the monitoring is already continuous) to ensure that the monitoring results are representative of actual emissions.

The Permittee is required to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the Department. The Department may use these records as a trigger for requesting source testing if the records show that maintenance has been deferred.

### **Condition 15, Dilution**

**Applicability:** Applies to the Permittee because the Permittee must comply with emission standards in 18 AAC 50.

**Factual Basis:** The requirement prohibits diluting emissions as a means of compliance. In practical terms, dilution only affects compliance when the emissions are being measured. Therefore, the monitoring is limited to immediately before source testing.

Dilution can occur by design or by leaks in the exhaust ductwork. Intentional dilution is not expected to be a problem, as it would increase operating costs by increasing induced draft fan power requirements. Careful review of source test plans and operating conditions will prevent intentional dilution. Therefore, only leaks need to be monitored under this condition.

The monitoring adequately prevents dilution by requiring leaks to be repaired before compliance with the emission standards are measured.

### **Condition 16, Reasonable Precautions to Prevent Fugitive Dust**

**Applicability:** Bulk material handling requirements apply to the Permittee because the Permittee may engage in bulk material handling, transporting, or storing; or may engage in industrial activity at the stationary source.

**Factual Basis:** The underlying regulation, 18 AAC 50.045(d), requires the Permittee to take reasonable action to prevent PM from being emitted into the ambient air.

### **Condition 17, Stack Injection**

**Applicability:** Applies to the stationary source because the stationary source contains a stack or source modified after November 1, 1982.

**Factual Basis:** The condition restates the prohibition on stack injection (i.e. disposing of material by injecting it into a stack.) No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

### **Condition 18, Open Burning**

**Applicability:** This condition prohibits open burning at the stationary source.

**Factual Basis:** The condition prohibits the stationary source from conducting open burning at the stationary source.

### **Condition 19, Air Pollution Prohibited**

**Applicability:** Air Pollution Prohibited requirements apply to the stationary source because the stationary source will have emissions.

**Factual Basis:** The condition prohibits the Permittee from causing any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property. While the other permit conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

The Permittee is required to report any complaints and injurious emissions. The Permittee must keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for these complaints and to submit copies of these records upon request of the Department.

The Department will determine whether the necessary actions were taken. No corrective actions are necessary if the complaint is frivolous or there is not a violation of 18 AAC 50.110, however this condition is intended to prevent the Permittee from prejudging that complaints are invalid.

### **Condition 20, Permit Renewal**

**Applicability:** Applies if the Permittee intends to renew the permit.

**Factual Basis:** The condition restates the regulatory deadlines, citing the specific dates applicable to the stationary source. Submittal of the renewal application is sufficient monitoring, recordkeeping and reporting.

### **Condition 21 , Requested Source Tests**

**Applicability:** Standard condition to be included in all permits.

**Factual Basis:** Condition requires the Permittee to conduct source tests as requested by the Department, therefore no monitoring is needed. Conducting the requested source test is its own monitoring.

### **Conditions 22 - 24, Operating Conditions, Reference Test Methods, Excess Air Requirements**

**Applicability:** Apply because the Permittee is required to conduct source tests by this permit.

**Factual Basis:** The Permittee is required to conduct source test as set out in conditions 22 through 24. These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with conditions 22 through 24 consist of the test reports required by condition 29.

### **Condition 25, Test Exemption**

**Applicability:** Applies when the emission unit exhaust is observed for visible emissions.

**Factual Basis:** As provided in 18 AAC 50.345(a), the requirements for test plans, notifications and reports do not apply to visible emissions observations by smoke readers, except in connection with required particulate matter testing.

### **Conditions 26 - 29, Test Deadline Extension, Test Plans, Notifications and Reports**

**Applicability:** Apply because the Permittee is required to conduct source test by this permit.

**Factual Basis:** Standard conditions 18 AAC 50.345(l) - (o) are incorporated through these conditions. These standard conditions supplement specific monitoring requirements stated elsewhere in this permit. The source test itself monitors compliance with this condition.

### **Condition 30, Certification**

**Applicability:** Applies because the permit requires the Permittee to submit reports, and because the condition is a standard condition.

**Factual Basis:** This condition restates the regulatory requirement that all reports must be certified. To ease the certification burden, the condition allows the excess emission reports to be certified with the semi-annual Operating Report, although the excess emission reports must be submitted more frequently. This condition supplements the reporting requirements of the permit and no monitoring, recordkeeping or reporting for this condition is needed.

### **Condition 31, Submittals**

**Applicability:** Applies because the Permittee is required to send reports to the Department.

**Factual Basis:** This condition merely specifies where submittals to the Department should be sent. Receipt of the submittal at the correct Department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of the permit and no monitoring, recordkeeping or reporting for this condition is needed.

### **Condition 32, Information Requests**

**Applicability:** Applies to all Permittees, and incorporates a standard condition.

**Factual Basis:** Incorporates a standard condition in regulation, which tells the Permittee to submit information requested by the Department. Receipt of the requested information is adequate monitoring.

### **Condition 33, Recordkeeping Requirements**

**Applicability:** Applies to records required by a permit.

**Factual Basis:** The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide adequate evidence of compliance with this requirement, therefore, no additional monitoring, recordkeeping or reporting is required.

### **Condition 34, Excess Emission and Permit Deviation Reports**

**Applicability:** Applies when the emissions or operations deviate from the requirements of the permit.

**Factual Basis:** This condition satisfies two state regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The reports themselves and the other monitoring records required under this permit provide monitoring of whether the Permittee has complied with the condition. Please note that there may be additional federally required excess emission reporting requirements.

### **Condition 35, Operating Reports**

**Applicability:** Applies to all permits.

**Factual Basis:** The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit. The reports themselves provide monitoring for compliance with this condition. The form in Section 13 can be used if elected by the Permittee.

### **Condition 36, Annual Compliance Certifications**

**Applicability:** Applies to all Permittees.

**Factual Basis:** This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Because this requirement is a report, no monitoring, recordkeeping or reporting is needed. The form in Section 14 can be used if elected by the Permittee.

### **Conditions 37 - 48, Standard Conditions**

**Applicability:** Applies to all operating permits.

**Factual Basis:** These are standard conditions required for all operating permits.