

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

**General Permit for  
Diesel Electric Generating Stations**

**STATEMENT OF BASIS  
of the terms and conditions for  
GPA**

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## INTRODUCTION

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

## PROCESS DESCRIPTION

The GPA 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 or 4931 and NAICS code 221112 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 the fuel use limit in the GPA permit - permit does not provide for compliance with these types of limits. This ensures that stationary sources subject to BACT or LAER limits, or any other Title I permit requirements, cannot 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. The stationary source is not accessible by the Federal Aid Highway System (FAHS); the displacement of each engine is less than 30 liters/cylinder; and all engines, other than fire pump engines subject to NSPS Subpart IIII, comply with NSPS/NESHAP requirements for non-emergency engines. GPA does not include all the applicable NSPS/NESHAP requirements for other engine categories. Therefore, stationary sources containing other engines may not use the permit.
7. 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.

8. As GPA does not contain the applicable requirements for the following list of devices, the power plant must not contain any
  - 8.1 boiler subject to 40 C.F.R. 60, Subparts D, Da, Db, or Dc;
  - 8.2 heaters or boilers rated at 1.7 MMBtu/hour heat input or more that burn kerosene, No. 1 fuel oil, or No.2 fuel oil;
  - 8.3 heaters or boilers rated at 0.3 MMBtu/hour heat input or more that burn used oil;
  - 8.4 gas turbine;
  - 8.5 fuel storage tank subject to 40 C.F.R. 60, Subparts K, Ka, or Kb;
  - 8.6 unit subject to any other federal emission standard in 40 C.F.R. 60, 61, 62, or 63 other than a reciprocating internal combustion engine, woodstove for space heating or an asbestos demolition /renovation project;
  - 8.7 incinerator; or
  - 8.8 unit 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).
  
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 this general permit.

### EMISSIONS

A summary of the potential to emit (PTE)<sup>1</sup> and assessable PTE as indicated in the application as calculated by the Department is shown in the table below.

**Table A - Emissions Summary, in Tons Per Year (TPY)**

Pollutant	NO <sub>x</sub>	CO	PM-10	SO <sub>2</sub>	VOC	HAPs	Total
PTE	249.5	53.8	17.5	28.6	19.8	0.2	369.4
Assessable PTE	249.5	53.8	17.5	28.6	19.8	0	369.2

<sup>1</sup> *Potential to Emit* or *PTE* means the maximum capacity of a stationary source to emit a pollutant under its physical or operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source, as defined in AS 46.14.990(23), effective 12/3/05.

The assessable PTE listed under Condition 31.1 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 Department used emission factors from EPA's AP-42, Section 3.3, Table 3.3.1 for diesel engines smaller than 600 HP. This is the more conservative of the two available sets of emission factors for diesel-fired reciprocating internal combustion engines. 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, these stationary sources are area sources of HAP emissions.

### **BASIS FOR REQUIRING AN OPERATING PERMIT**

Stationary sources operating under the GPA 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).

These stationary sources avoid classification as PSD major as defined in 18 AAC 50.306 because 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);
- ⇒ Each emission unit regulated by a standard incorporated by reference in 18 AAC 50.040(a)-(d); and
- ⇒ Emission units subject to requirements in an existing Department permit 18 AAC 50.326(a).

## STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The state and federal regulations for each condition are cited in the GPA.

### Conditions 1 - 4 & Section 10, Visible Emissions Standard and MR&R

**Legal Basis:** These conditions ensure compliance with the applicable requirements in 18 AAC 50.050(a) and 18 AAC 50.055(a).

- 18 AAC 50.055(a) applies to the operation of fuel-burning equipment and. Diesel engines are fuel-burning equipment.

U.S. EPA incorporated these standards as revised in 2002 into the SIP effective September 13, 2007.

**Factual Basis:** Condition 1 prohibits the Permittee from causing or allowing visible emissions in excess of the applicable standard in 18 AAC 50.055(a)(1). The Permittee shall not cause or allow the equipment to violate these standards.

Conditions 2 through 4 and Section 10 MR&R conditions are standard conditions adopted into regulation pursuant to AS 46.14.010(e).

Beyond as noted above, the Department has previously determined that the standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No additional emission unit or stationary source operational or compliance factors indicate the unit-specific or stationary-source-specific conditions would better meet the requirements. Therefore, the Department concludes that the standard conditions as modified meets the requirements of 40 C.F.R. 71.6(a)(3).

#### **Liquid Fuel-Fired Burning Equipment:**

Monitoring – The visible emissions may be observed by either Method-9 or the Smoke/No Smoke plans as detailed in Condition 2. Corrective actions such as maintenance procedures and either more frequent or less frequent testing may be required depending on the results of the observations.

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

Reporting – The Permittee is required to report: 1) emissions in excess of the federal and the state visible emissions standard and 2) deviations from permit conditions. The Permittee is required to include copies of the results of all visible emission observations with the stationary source operating report.

### Conditions 5 - 8 & Section 10, Particulate Matter (PM) Standard

**Legal Basis:** These conditions ensure compliance with the applicable requirement in 18 AAC 50.055(b). This requirement applies to operation of all industrial processes and fuel burning equipment in Alaska.

- Diesel engines are fuel-burning equipment.

These PM standards also apply because they are contained in the federally approved SIP effective September 13, 2007.

**Factual Basis:** Condition 5 prohibits emissions in excess of the state PM (also called grain loading) standard applicable to fuel-burning equipment and industrial processes. The Permittee shall not cause or allow fuel-burning equipment or industrial processes to violate this standard.

The Permittee must establish by actual visual observations which can be supplemented by other means, such as a defined Operation and Maintenance Program that the emission unit is in continuous compliance with the State's emission standards for particulate matter.

**Liquid Fuel-Fired Burning Equipment:**

For liquid fuel units the MR&R conditions are Standard Permit Condition IX adopted into regulation pursuant to AS 46.14.010(e). The Department determined that these standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard conditions meet the requirements of 40 C.F.R. 71.6(a)(3).

**Condition 9, Sulfur Compound Emissions**

**Legal Basis:** This condition requires the Permittee to comply with the sulfur compound emission standard for all fuel-burning equipment and industrial processes in the State of Alaska.

- Diesel Engines are fuel-burning equipment.

These sulfur compound standards also apply because they are contained in the federally approved SIP effective September 13, 2007.

**Factual Basis:** The condition requires the Permittee to comply with the sulfur compound emission standard applicable to fuel-burning equipment. The Permittee may not cause or allow the affected equipment to violate this standard.

Sulfur dioxide comes from the sulfur in the fuel (e.g. coal, natural gas, fuel oils).

**Liquid Fuels:**

For oil fired fuel burning equipment, the MR&R conditions are Standard Permit Condition XI adopted into regulation pursuant to AS 46.14.010(e). These conditions have been modified in this permit as follows. The Department corrected Condition 9.2 to replace the text "...method listed in 18 AAC 50.035 or an alternative method approved by the Department" with "...method listed in 18 AAC 50.035(b)-(c) and 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1)". The text "...or an alternative method approved by the Department" was discarded during the Revised Action Plan submitted to EPA on July 15, 2007, as a result of the EPA Audit of the September 2006 Title V Program Review. This text is not to be used in subsequent permits since it allows a Permittee to bypass the public process for changing monitoring requirements by submitting off-record requests to change monitoring methods.

Beyond as noted above, the Department has previously determined that the standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No additional emission unit or stationary source operational or compliance factors indicate the unit-specific or stationary-source-specific conditions would better meet the requirements. Therefore, the Department concludes that the standard conditions as modified meets the requirements of 40 C.F.R. 71.6(a)(3).

### **Condition 10, Used Oil in Diesel Engines**

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

**Factual Basis:** This condition sets out the requirements for burning used oil in engines.

Some owners and operators blend used crankcase oil (used oil fuels) to supplement engine fuel oil. The Permittee is prohibited from burning used oil blends in the engines, except for testing purposes, until the Department approves of a source test demonstrating that burning the used oil will comply with the particulate matter emission standard of Condition 5 and the visible emission standard of Condition 1. Because of various metal pollutants, used oil may have higher particulate emissions and sulfur emissions than virgin fuel oil. Applying typical ash content of used oil published in AP-42, and stoichiometric combustion conditions, the Department determined that used oil fuel emissions may exceed state particulate matter emission standards in 18 AAC 50.055(b)(1). Sulfur content may approach that equivalent to the State sulfur compound standard of 18 AAC 50.055 (c).

Used oil fuel is limited and monitored as set out by Condition 10. 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 equivalent to that protective of state emission standards. The Department added a requirement to blend at a ratio of no more than that demonstrated within a particulate matter source test, unless Department approved to mix at a greater ratio. However, the Permittee must still test used oil fuels for sulfur and ensure that the ratio of used oil fuel with other fuel oils comply with the sulfur limit.

### **Condition 11, Used Oil in Boilers or Heaters**

**Legal Basis:** 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 11. 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 State particulate matter standard in 18 AAC 50.055(b)(1), 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 other fuel oils comply with the sulfur limit.

### **Condition 12, Insignificant Emission Units (IEUs)**

**Legal Basis:** The Permittee is required to meet state emission standards set out in 18 AAC 50.055 for all industrial processes fuel-burning equipment, and incinerators regardless of size.

**Factual Basis:** The conditions re-iterate the emission standards and require compliance for IEUs. 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 units at this stationary source do not require specific monitoring, recordkeeping and reporting to ensure compliance under these conditions.

Condition 12.4a requires certification under Condition 54 that each IEU did not exceed state emission standards during the previous year and did not emit any prohibited air pollution. As long as they do not exceed the actual emissions thresholds in 18 AAC 50.326(e) and are not subject to a federal emission limitation in accord with 18 AAC 50.326(d), they are considered insignificant units and no monitoring is required in accordance with Department Policy and Procedure No. AWQ 04.02.103, Topic # 3, 10/8/04 for standby emission units.

### **Condition 13, NO<sub>x</sub> PSD Avoidance**

**Legal Basis:** These conditions are owner requested limits to avoid a PSD review for NO<sub>x</sub>.

**Factual Basis:** Condition 13 limits emission of NO<sub>x</sub> 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 engine. 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  $\text{NO}_x = 4.41 \text{ lb/MMBtu} = 4.41 \text{ lb NO}_x / 7.29 \text{ gal}$   
 $4.41 \text{ lb NO}_x / 7.29 \text{ gal} = 250 \text{ ton} \times 2000 \text{ lb/ton} / X$   
 $X = 826,530 \text{ gal/year}$   
the fuel limit was set at 825,000 gallons per year.

The emission factors used to set this limit are inexact and may vary by more than 10%. Therefore, Condition 13 has the requirement to source test diesel engines rated greater than 400 hp to determine equipment specific emission factors when the stationary source annual fuel consumption exceeds 750,000 gallons per 12 months.

A fuel limit analysis is required if testing shows an emission factor greater than 4.41 lb/MMBtu to evaluate whether or not the 825,000 gallon/yr fuel limit still limits the stationary source  $\text{NO}_x$  emissions to less than 250 tons per 12 consecutive month period. Since engines greater than 600 hp have a lower  $\text{NO}_x$  emission factor than engines 600 hp or less, the fuel limit may continue to limit  $\text{NO}_x$  emissions to 250 tons per 12 consecutive month period.

#### Conditions 14 – 18, NSPS Subpart A Requirements

**Legal Basis:** The Permittee must comply with those New Source Performance Standard (NSPS) provisions incorporated by reference the NSPS effective July 1, 2007, for specific industrial activities, as listed in 18 AAC 50.040<sup>2</sup>.

Most affected facilities (with the exception of some storage tanks) subject to an NSPS are subject to Subpart A. At this stationary source, the affected facility is subject to NSPS Subpart IIII and therefore subject to Subpart A.

Conditions 14.1 through 14.3 - The Permittee has already complied with the notification requirements in 40 C.F.R. 60.7 (a)(1) - (4) for the affected facility. However, the Permittee is still subject to these requirements in the event of a new NSPS affected facility<sup>3</sup> or in the event of a modification or reconstruction of an existing facility<sup>4</sup> into an affected facility.

Condition 14.4- The requirements to notify the EPA and the Department of any proposed replacement of components of an existing facility (40 C.F.R. 60.15) apply in the event that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility.

Condition 15 - Start-up, shutdown, or malfunction record maintenance requirements in 40 C.F.R. 60.7(b) are applicable to all NSPS affected facilities subject to Subpart A.

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<sup>2</sup> EPA has not delegated to the Department the authority to administer the NSPS program as of the issue date of this permit

<sup>3</sup> *Affected facility* means, with reference to a stationary source, any apparatus to which a standard applies, as defined in 40 C.F.R. 60.2, effective 7/1/07.

<sup>4</sup> *Existing facility* means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type, as defined in 40 C.F.R. 60.2, effective 7/1/07.

Recordkeeping requirements in 40 C.F.R. 60.7(f) are applicable to all NSPS affected facilities. (Satisfied by Condition 48)

Condition 16 - Good air pollution control practices in 40 C.F.R. 60.11 are applicable to all NSPS affected facilities subject to Subpart A.

Condition 17 - States that any credible evidence may be used to demonstrate compliance or establishing violations of relevant NSPS standards for the affected facility

Condition 18 - Concealment of emissions prohibitions in 40 C.F. R. 60.12 are applicable to the affected facility.

**Factual Basis:** Subpart A contains the general requirements applicable to all affected facilities (emission units) subject to NSPS. In general, the intent of NSPS is to provide technology-based emission control standards for new, modified and reconstructed affected facilities.

### **Conditions 19 - 23, NSPS Subpart III Requirements**

**Legal Basis:** NSPS Subpart III applies to stationary compression ignition internal combustion engines (CI ICE) that commence construction, modification, or reconstruction after July 11, 2005 where the stationary CI ICE are manufactured after April 1, 2006 for non-fire pump engines and after July 1, 2006 for certified fire pump engines.

**Factual Basis:** These conditions incorporate the NSPS Subpart III emissions standards applicable to the affected facility. The Permittee may not cause or allow the affected facility to violate these standards. These conditions also provide MR&R specifically called out for within the subpart. The Permittee is required to operate and maintain the stationary CI ICE according to the manufacturer's emission-related written instructions. Compliance with the fuel requirements under 40 C.F.R. 60.4207 is not required for engines with a model year prior to 2014 because the stationary source is in an area not accessible by the Federal Aid Highway System (FAHS). If applicable, upon initial startup the Permittee shall provide a copy of the Manufacturer's Engine Certification in the next operating report required by Condition 53. The requirement in Condition 23 is added to fill a gap in the reporting requirement under this subpart.

### **Conditions 24 - 26, NESHAP Subpart ZZZZ Requirements**

**Legal Basis:** NESHAP Subpart ZZZZ applies to owners and operators of stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions.

**Factual Basis:** NESHAP Subpart ZZZZ applies to any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE units being tested at a stationary RICE test cell/stand. As indicated in Table A, the stationary source is not a major source of HAP emissions and is therefore subject to the requirements for area sources of HAPs. The affected facility is subject to NESHAP Subpart ZZZZ based on its construction, manufacturer, or reconstruction date. Per 40 C.F.R.63.6590(c), affected new or reconstructed stationary reciprocating internal combustion engines (RICE) located at an area source must meet the requirements of Subpart ZZZZ by meeting the requirements of NSPS Subpart III and no further requirements apply for such engines under 40 C.F.R. 63.

For affected existing RICE located at an area source, the Permittee is required to perform inspections and maintenance at intervals specified by the subpart and operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS). Therefore, under 40 C.F.R. 63.6603(b), existing RICE greater than 500 hp do not have to comply with the numerical CO limits specified in Table 2d. Also, existing RICE are exempt from the fuel requirements of 40 C.F.R. 63.6604 under 40 C.F.R. 63.6604(d). Additionally, existing RICE are exempt from the notification requirements of 40 C.F.R. 63.6645(a) under 40 C.F.R. 63.6645(a)(5) since none of the emission units are subject to numerical emission standards.

### **Conditions 27 - 29, Standard Terms and Conditions**

**Legal Basis:** These are standard conditions required under 18 AAC 50.345(a) and (e)-(g) for all operating permits. This provision is incorporated in the federally approved Alaska operating permit program of November 30, 2001, as updated effective November 9, 2008.

**Factual Basis:** These are standard conditions that apply to all permits.

### **Condition 30, Administration Fees**

**Legal Basis:** This condition ensures compliance with the applicable requirement in 18 AAC 50.400-405 as derived from AS 46.14.130. This condition requires the Permittee, owner, or operator to pay administration fees as set out in regulation. Paying administration fees is required as part of obtaining and holding a permit with the Department or as a fee for a Department action.

**Factual Basis:** The owner or operator of a stationary source who is required to apply for a permit under AS 46.14.130 shall pay to the Department all assessed permit administration fees. The regulations in 18 AAC 50.400-405 specify the amount, payment period, and the frequency of fees applicable to a permit action.

### **Conditions 31 - 32 & Section 14, Emission Fees**

**Legal Basis:** These conditions ensure compliance with the applicable requirement in 18 AAC 50.410-420. 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 emission fee conditions are Standard Permit Condition I under 18 AAC 50.346(b) adopted pursuant to AS 46.14.010(e). Except for the modification noted in the last paragraph of this “Factual Basis”, the Department determined that these standard conditions adequately meet the requirements of AS 46.14.250. No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard conditions meet the requirements of AS 46.14.250.

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 generally potential emissions of each air pollutant in excess of 10 tons per year authorized by the permit (AS 46.14.250(h)(1)(A)).

The conditions allow the Permittee to 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 shall 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 Department modified the standard condition to correct Condition 32.2 such that it referenced “submitted” (i.e., postmarked) rather than “received” in accordance with the timeframe of Condition 32.1.

### **Condition 33, Dilution**

**Legal Basis:** This condition prohibits the Permittee from using dilution as an emission control strategy as set out in 18 AAC 50.045(a). This state regulation applies to the Permittee because the Permittee is subject to emission standards in 18 AAC 50.

**Factual Basis:** The condition prohibits the Permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50.

### **Condition 34, Reasonable Precautions to Prevent Fugitive Dust**

**Legal Basis:** This condition requires the Permittee to use reasonable precautions when handling, storing or transporting bulk materials or engaging in an industrial activity in accordance with the applicable requirement in 18 AAC 50.045(d). Bulk material handling requirements apply to the Permittee because the Permittee will engage in bulk material handling, transporting, or storing; or will engage in industrial activity at the stationary source.

**Factual Basis:** The condition requires the Permittee to comply with 18 AAC 50.045(d), and take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air.

The Department adopted this standard condition as Standard Permit Condition X under 18 AAC 50.346(c) pursuant to AS 46.14.010(e). The Department determined that this standard condition adequately meets the requirements of 40 C.F.R. 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard condition meet the requirements of 40 C.F.R. 71.6(a)(3).

### **Condition 35, Stack Injection**

**Legal Basis:** This condition ensures compliance with the applicable requirement in 18 AAC 50.055(g). It prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). Stack injection requirements apply to the stationary source because the stationary source contains a stack or unit constructed or modified after November 1, 1982.

**Factual Basis:** No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the unit or stack would need to be modified to accommodate stack injection.

### **Condition 36, Air Pollution Prohibited**

**Legal Basis:** This condition ensures compliance with the applicable requirement in 18 AAC 50.110. 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. Air Pollution Prohibited requirements apply to the stationary source because the stationary source will have emissions.

**Factual Basis:** 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.

ADEC adopted this standard condition into 18 AAC 50.346(a) pursuant to AS 46.14.010(e). The Department determined that this condition adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard condition meets the requirements of 40 C.F.R. 71.6(a)(3).

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.

### **Condition 37, Asbestos NESHP**

**Legal Basis:** The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. This condition ensures compliance with the applicable requirement in 18 AAC 50.040(b)(1) and (2)(F). The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

**Factual Basis:** 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 to ensure compliance with these federal regulations.

### **Condition 38, Open Burning**

**Legal Basis:** The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the stationary source. This condition ensures compliance with the applicable requirement in 18 AAC 50.065. The open burning state regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the stationary source.

**Factual Basis:** No specific monitoring is required for this condition. Condition 38.1 requires the Permittee to keep "sufficient records" to demonstrate compliance with the standards for conducting open burning, but does not specify what these records should contain.

More extensive monitoring and recordkeeping is not warranted because the Permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored. Compliance is demonstrated through annual certification required under Condition 54.

### **Condition 39, Requested Source Tests**

**Legal Basis:** The Permittee is required to conduct source tests as requested by the Department. The Department adopted this condition under 18 AAC 50.345(k) as part of its operating permit program approved by EPA November 30, 2001.

**Factual Basis:** This condition ensures compliance with the applicable requirement in 18 AAC 50.220(a) and applies because this is a standard condition to be included in all operating permits. Monitoring consists of conducting the requested source test.

### **Conditions 40 - 42, Operating Conditions, Reference Test Methods, Excess Air Requirements**

**Legal Basis:** These conditions ensure compliance with the applicable requirement in 18 AAC 50.220(b) and apply because the Permittee is required to conduct source tests by this permit. The Permittee is required to conduct source tests as set out in Conditions 40 through 42.

**Factual Basis:** These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with Conditions 40 through 42 consist of the test reports required by Condition 47.

### **Condition 43, Test Exemption**

**Legal Basis:** This condition ensures compliance with the applicable requirement in 18 AAC 50.345(a) and applies when the unit exhaust is observed for visible emissions.

**Factual Basis:** As provided in 18 AAC 50.345(a), amended November 9, 2008, 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 44 - 47, Test Deadline Extension, Test Plans, Notifications and Reports**

**Legal Basis:** These conditions ensure compliance with the applicable requirement in 18 AAC 50.345(l)-(o) and 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 48, Recordkeeping Requirements**

**Legal Basis:** Applies because the Permittee is required by the permit to keep records.

**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 an evidence of compliance with this requirement.

#### **Condition 49, Certification**

**Legal Basis:** This condition requires the Permittee to comply with the certification requirement in 18 AAC 50.205 and applies to all Permittees under EPA's approved operating permit program of November 30, 2001.

**Factual Basis:** This standard condition is required in all operating permits under 18 AAC 50.345(j). This condition requires the Permittee to certify any permit application, report, affirmation, or compliance certification submitted to the Department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be certified with the stationary source report, even though it must still be submitted more frequently than the stationary source operating report. This condition supplements the reporting requirements of this permit.

#### **Condition 50, Submittals**

**Legal Basis:** This condition requires the Permittee to comply with standardized reporting requirement in 18 AAC 50.326(j) and applies because the Permittee is required to send reports to the Department.

**Factual Basis:** This condition lists the Department's appropriate address for reports and written notices. The Permittee is required to submit an original and one copy reports, compliance certifications, and other submittals required by this permit. Receipt of the submittal at the correct Department office is sufficient monitoring for this condition. This condition supplements the standard reporting and notification requirements of this permit.

#### **Condition 51, Information Requests**

**Legal Basis:** This condition requires the Permittee to submit requested information to the Department. This is a standard condition from 18 AAC 50.345(i) of the state approved operating permit program effective November 30, 2001.

**Factual Basis:** This condition requires the Permittee to submit information requested by the Department. Monitoring consists of receipt of the requested information.

#### **Condition 52 & Section 11, Excess Emission and Permit Deviation Reports**

**Legal Basis:** This condition requires the Permittee to comply with the applicable requirement in 18 AAC 50.235(a)(2) and 18 AAC 50.240. Also, the Permittee is required to notify the Department when 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 Department adopted this condition as Standard Permit Condition III under 18 AAC 50.346(c) pursuant to AS 46.14.010(e). The Department made a correction to the Standard Operating Permit Condition III to allow identical reporting methodology for both Excess

Emissions and Permit Deviations reports which use identical forms and should have identical submissions methods. Beyond as noted above, the Department has previously determined that the standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No additional emission unit or stationary source operational or compliance factors indicate the unit-specific or stationary-source-specific conditions would better meet the requirements. Therefore, the Department concludes that the standard conditions as modified meets the requirements of 40 C.F.R. 71.6(a)(3).

#### *Section 11, Notification Form*

The Department modified the notification form contained in Standard Permit Condition IV in a revised rulemaking dated August 20, 2008 to more adequately meet the requirements of Chapter 50, Air Quality Control. The rulemaking for these changes took effect November 9, 2008. The modification consisted of correcting typos and moving “Failure to Monitor/Report” and “Recordkeeping Failure” to Section 2 - permit deviations.

### **Condition 53 & Section 12, Operating Reports**

**Legal Basis:** This condition ensures compliance with the applicable requirement in 18 AAC 50.346(b)(6) and 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 Department used Standard Permit Condition VII as adopted into regulation pursuant to AS 46.14.010(e) and revised on September 27, 2010. Beyond as noted above, the Department has previously determined that the standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No additional emission unit or stationary source operational or compliance factors indicate the unit-specific or stationary-source-specific conditions would better meet the requirements. Therefore, the Department concludes that the standard conditions as modified meets the requirements of 40 C.F.R. 71.6(a)(3).

### **Condition 54 & Section 13, Annual Compliance Certification**

**Legal Basis:** This condition ensures compliance with the applicable requirement in 18 AAC 50.040(j)(4) and applies to all Permittees.

**Factual Basis:** This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Each annual certification provides monitoring records for compliance with this condition.

Condition 54.2 provides clarification of transition periods between an expiring permit and a renewal permit to ensure that the Permittee certifies compliance with the permit terms and conditions of the permit that was in effect during those partial date periods involved in the transition. No format is specified: the Permittee may provide one report certifying compliance with each permit term or condition for each of the effective permits during the certification period, or may choose to provide two reports – one certifying compliance with permit terms and conditions from January 1 until the date of expiration of the old permit, and a second report certifying compliance with terms and conditions in effect from the effective date of the renewal permit until December 31.

The Permittee is required to submit to the Department an annual compliance certification report. The Permittee may submit the required certification electronically in accordance with Condition 50. This change more adequately meets the requirements of 18 AAC 50 and agency needs, as the Department can more efficiently distribute the electronic copy to staff in other locations.

### **Condition 55, Emission Inventory Reporting**

**Legal Basis:** This condition requires the Permittee to submit emissions data to the State to satisfy the federal requirement to submit emission inventory data from point sources as required under 40 C.F.R. 51.321 (6/10/02). It applies to sources defined as point sources in 40 C.F.R. 51.50. The State must report all data elements in Table 2A of Appendix A to Subpart A of 40 C.F.R. 51 to EPA (73 FR 76556).

**Factual Basis:** The emission inventory data is due to EPA 12 months after the end of the reporting year (40 C.F.R. 51.30(a)(1) and (b)(1), 12/17/08). A due date of March 31 corresponds with sources reporting actual emissions for assessable emissions purposes and provides the Department sufficient time to enter the data into EPA's electronic reporting system.

The air emissions reporting requirements under 40 C.F.R. Part 51 Subpart A apply to states; however, states rely on information provided by point sources to meet the reporting requirements of Part 51 Subpart A. In the past, the Department has made information requests to point sources, to which the point source is obligated to reply under 18 AAC 50.200. The information requests occur on a routine basis as established by Part 51 Subpart A and consume significant staff resources. To increase governmental efficiency and reduce costs associated with information requests that occur on a routine basis, it has been determined that a standard permit condition best fulfills the need to gather the information needed to satisfy the requirements of Subpart A of 40 C.F.R. 51.

To ensure that the Department's electronic system reports complete information to the National Emissions Inventory, Title V stationary sources are required to submit all the data elements required for the Type B source triennial reports (see also Table 2A of Appendix A to Subpart A of 40 C.F.R. Part 51).

### Conditions 56 - 58, Permit Changes and Revisions Requirements

**Legal Basis:** The Permittee is obligated to notify the Department of certain off-permit source changes and operational changes under 18 AAC 50.326(j)(4). 40 C.F.R. 71.6(a)(10), (12), and (13) incorporated by reference under 18 AAC 50.040(j) require these provisions within this permit. 40 C.F.R. 70 Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001.

**Factual Basis:** These are conditions required in 40 C.F.R. 71.6 for all operating permits to allow changes within a permitted stationary source without requiring a permit revision.

### Condition 59, Permit Renewal

**Legal Basis:** The Permittee must submit a timely and complete operating permit renewal application if the Permittee intends to continue source operations in accord with the operating permit program under 18 AAC 50.326(j)(3). The obligations for a timely and complete operating permit application are set out in 40 C.F.R. 71.5 incorporated by reference in 18 AAC 50.040(j)(3). 40 C.F.R. 70 Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001.

**Factual Basis:** In accordance with AS 46.14.230(a), this operating permit is issued for a fixed term of five years after the date of issuance, unless a shorter term is requested by the permit applicant. The Permittee is required to submit an application for permit renewal by the specific dates applicable to the stationary source as listed in this condition. As stated in 40 C.F.R. 71.5(a)(1)(iii), submission for a permit renewal application is considered timely if it is submitted at least six months but no more than eighteen months prior to expiration of the operating permit. According to 71.5(a)(2), a complete renewal application is one that provides all information required pursuant to 40 C.F.R. 71.5(c) and must remit payment of fees owed under the fee schedule established pursuant to 18 AAC 50.400. 40 C.F.R. 71.7(b) states that if a source submits a timely and complete application for permit issuance (including renewal), the source's failure to have a permit is not a violation until the permitting authority takes final action on the permit application.

Therefore, for as long as an application has been submitted within the timeframe allowed under 40 C.F.R. 71.5(a)(1)(iii), and is complete before the expiration date of the existing permit, then the expiration of the existing permit is extended and the Permittee has the right to operate under that permit until the effective date of the new permit. However, this protection shall cease to apply if, subsequent to the completeness determination, the applicant fails to submit by the deadline specified in writing by the Department any additional information needed to process the application. Monitoring, recordkeeping, and reporting for this condition consist of the application submittal.

### Conditions 60 - 64, General Compliance Requirements and Schedule

**Legal Basis:** These conditions ensure compliance with the applicable requirement in 18 AAC 50.326(j)(3). The Permittee is required to comply with these standard conditions set out in 18 AAC 50.345 included in all operating permits. 40 C.F.R. 70 Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001. Additionally, Permit Condition 61 includes the compliance plan and schedule element as required by 40 CFR 71.6(c)(3) and 71.5(c)(8) by reference.

**Factual Basis:** These are standard conditions for compliance required for all operating permits and for Condition 61.1, minimum elements of an operating permit incorporated by reference in 18 AAC 50.040(j).