

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

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**STATEMENT OF BASIS
for 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 (GP-A) for diesel electric generating stations with diesel engines and auxiliary fuel burning equipment.

STATIONARY SOURCE IDENTIFICATION

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 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_x 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 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 either not accessible by the Federal Aid Highway System (FAHS), or meets all of the requirements under 40 C.F.R. 63.6603(b)(2); 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 SO₂ special-protection area; this criterion prevents new stationary sources in an SO₂ 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:

- boiler subject to 40 C.F.R. 60, Subparts D, Da, Db, or Dc;
 - 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;
 - heaters or boilers rated at 0.3 MMBtu/hour heat input or more that burn used oil;
 - gas turbine;
 - fuel storage tank subject to 40 C.F.R. 60, Subparts K, Ka, or Kb;
 - 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;
 - incinerator; or
 - 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 preconstruction/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)¹⁷ 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)

Emissions	NO _x	CO	PM ₁₀	SO ₂	VOC	HAPs	CO _{2e} ¹	Total ²
PTE	249.5	53.8	17.5	28.6	19.8	0.2	9,090	369.4
Assessable PTE	249.5	53.8	17.5	28.6	19.8	0	N/A	369.2

Notes:

1. CO_{2e} emissions are defined as the sum of the mass emissions of each individual GHG adjusted for its global warming potential.
2. Total PTE and total assessable PTE shown in the table do not include CO_{2e} and HAPs.

The assessable PTE listed under Condition 33.1 is the sum of the PTE of each individual air pollutant, other than greenhouse gases (GHGs), for which the stationary source has PTE of 10 TPY or greater. 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

¹⁷ *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(22).

factors for diesel-fired reciprocating internal combustion engines. The listing of the emissions does not create an enforceable limit for the stationary source.

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 permit condition are cited in the permit.

Conditions 1, 2 & Section 10, Visible Emissions Standard and MR&R

Legal Basis: These conditions require compliance with the visible emissions standards in 18 AAC 50.055(a).

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

U.S. EPA approved the addition of these standards to the SIP, as noted in 40 C.F.R. 52.70. The Department included permit conditions for MR&R as required by 40 C.F.R. 71.6(a)(3) and 71.6(c)(1).

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). MR&R requirements are listed in Conditions 2 through 4 of the permit. These conditions have been adopted into regulation as Standard Permit Condition (SPC) IX. The Department has determined that the standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No additional emissions unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source-specific conditions would better meet the requirements. Therefore, the Department concludes that the standard conditions, as modified, meet the requirements of 40 C.F.R. 71.6(a)(3).

Except for gas fuel-burning equipment, the Permittee must establish by visual observations, which may be supplemented by other means, such as a defined Stationary Source Operation

and Maintenance Program, that the stationary source is in continuous compliance with the state's emission standards for visible emissions.

These conditions detail a stepwise monitoring program to determine compliance with the state's visible emissions standards for liquid fuel-burning emissions units. Equipment types covered by these conditions are internal combustion engines, turbines, heaters, boilers, and flares. Initial monitoring frequency schedules are established along with subsequent reductions or increases in frequency depending on the results of the self-monitoring program.

Reasonable action thresholds are established in these conditions that require the Permittee to progressively address potential visible emission problems from emissions units either through maintenance programs and/or more rigorous tests that will quantify whether a specific emission standard has been exceeded.

Liquid Fuel- Burning Equipment:

Monitoring – The emissions units must be observed by either the Method 9 or the Smoke/No Smoke Plans as detailed in Condition 2. Corrective actions such as maintenance procedures or more frequent observations may be required depending on the results of the observations.

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

Reporting - The Permittee is required to report emissions in excess of the state visible emissions standard and deviations from permit conditions. The Permittee is also required to include copies of the results of all visible emission observations in the operating report.

Conditions 5 through 8, Particulate Matter Standard and MR&R

Legal Basis: These conditions require compliance with the applicable requirement in 18 AAC 50.055(b).

- 18 AAC 50.055(b)(1) applies to the operation of fuel-burning equipment and industrial processes. Diesel engines are fuel-burning equipment.

This particulate matter standard applies because it is contained in the federally-approved SIP. The Department included permit conditions for MR&R as required by 40 C.F.R. 71.6(a)(3) and 71.6(c)(1).

Factual Basis: Condition 5 prohibits emissions in excess of the applicable state particulate matter standard. MR&R requirements are listed in Condition 6 of the permit. These conditions have been adopted into regulation as SPC IX. The Department has modified these conditions as follows:

- Added gap-fill recordkeeping requirements in Condition 7.

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

Except for gas fuel-burning equipment, the Permittee must establish by visual observations, which may be supplemented by other means, such as a defined Stationary Source Operation and Maintenance Program, that the stationary source is in continuous compliance with the state's emission standards for particulate matter.

Liquid Fuel-Burning Equipment:

Monitoring – The Permittee is required to conduct particulate matter source testing if threshold values for opacity are exceeded.

Recordkeeping - The Permittee is required to record the results of particulate matter source tests.

Reporting - The Permittee is required to report incidents when emissions in excess of the opacity threshold are observed and results of particulate matter source tests. The Permittee is also required to include copies of the results of all visible emission observations taken during particulate matter source testing in the operating report.

Condition 9 through 10, Sulfur Compound Emissions Standard and MR&R

Legal Basis: This condition requires compliance with the sulfur compound emissions standard under 18 AAC 50.055(c).

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

The sulfur compound standard applies because it is contained in the federally-approved SIP. The Department included permit conditions for MR&R as required by 40 C.F.R. 71.6(a)(3) and 71.6(c)(1).

Factual Basis: The Permittee may not cause or allow the affected equipment to violate the applicable sulfur compound 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 SPCs XI and XII adopted into regulation pursuant to AS 46.14.010(e). These conditions have been modified in this permit as follows. The Department corrected Condition 10.2 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 determined that the standard permit conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No additional emissions 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, meet the requirements of 40 C.F.R. 71.6(a)(3).

Condition 12, Used Oil in Diesel Engines

Legal Basis: 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 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. 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 12. 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 13, Plant-Wide Applicability Limitation (PAL)

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 13. 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 14, Insignificant Emission Units

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 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 units at this stationary source do not require specific monitoring, recordkeeping and reporting to ensure compliance under these conditions.

Condition 14.4.a requires certification that the units 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 thresholds, 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 15, NOx PSD Avoidance

Legal Basis: These conditions are owner requested limits to avoid a PSD review for NOx.

Factual basis: Condition 15 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 NOx 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 NOx = 4.41 lb/MMBtu = 4.41 lb NOx / 7.29 gal
 $4.41 \text{ lb NOx} / 7.29 \text{ gal} = 250 \text{ ton} \times 2000 \text{ lb/ton} / X$
 $X = 826,530 \text{ gal/year}$
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 15 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 NOx emissions to less than 250 tons per 12 consecutive month period.

Since engines greater than 600 hp have a lower NO_x emission factor than engines 600 hp or less, the fuel limit may continue to limit NO_x emissions to 250 tons per 12 consecutive month period.

Conditions 16 through 17, NSPS Subpart A Requirements

Legal Basis: The EPA approved Alaska's Part 70 Program granted on November 30, 2001 (40 CFR 70 Appendix A). The Department is the permitting authority for the Part 70 program. As the permitting authority, the Department requires compliance with all permit conditions. Although the EPA has not delegated to the Department the authority to administer the New Source Performance Standard (NSPS) program, NSPS requirements are included in the definition for "applicable requirement" under 40 C.F.R. 71.2, which has been adopted by the Department under 18 AAC 50.040(j)(1).

The NSPS provisions under Subparts A and IIII apply to the stationary source. Therefore, the Department requires compliance with those standards in a Part 70 permit issued under the approved program. However, the Department is unable to change the actual wording of the relevant standard to substitute "the Department" for "the Administrator" in those standards. Since the Department expects access to any permit-related information provided by the Permittee to the EPA, the Department will act on its responsibility as the permitting authority to determine compliance with the standard. To reflect this relationship and for the purposes of this permit, the Department has defined "the Administrator" to mean the "EPA and the Department" for conditions implementing the federal emission standards under Section 4.

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.

Condition 16.1 - 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 facility¹⁸.

Condition 16.2 - 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 17 - Concealment of emissions prohibitions in 40 C.F.R. 60.12 are applicable to the affected facility.

Recordkeeping requirements in 40 C.F.R. 60(f) are applicable to all NSPS affected facilities. (Satisfied by Condition 51.)

Factual Basis: Subpart A contains general requirements applicable to all affected facilities (emissions 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.

¹⁸ *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.

Conditions 18 through 22, 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. Diesel engines are subject to Subpart III under 40 C.F.R. 60.4200 because < >.

Factual Basis: These conditions incorporate the 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 written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. The Permittee is required to monitor and record the monthly engine hours of operation and the rolling 12-month hours of operation on each affected CI ICE. Each affected pre-2007 model year stationary CI ICE must comply with the emission standards in Table 2 to Subpart III. Upon initial startup the Permittee shall provide a copy of the Manufacturer's Engine Certification in the next operating report required by Condition 56. The requirement in Condition 22 is added to fill gap in the reporting requirement under this Subpart.

Conditions 23 through 28, NESHAPs Subpart ZZZZ Requirements

Legal Basis: The Department has incorporated by reference the NESHAP requirements for specific industrial activities, as listed in 18 AAC 50.040(c). NESHAP Subpart ZZZZ applies to owners and operators of any existing, new, or reconstructed stationary reciprocating internal combustion engines (RICE), whose construction commenced before June 12, 2006, located at major and area sources of HAP emissions, excluding stationary RICE units being tested at a stationary RICE test cell/stand. The affected facility is an area source that owns and operates RICE units subject to NESHAP Subpart ZZZZ.

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 either not accessible by the Federal Aid Highway System (FAHS), or meets all of the requirements under 40 C.F.R. 63.6603(b)(2). Therefore, under 40 C.F.R. 63.6603(b), existing RICE greater than 300 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 29 through 31, Standard Terms and Conditions

Legal Basis: These are standard conditions required for all operating permits under 18 AAC 50.345(a) and (e)-(g). As stated in 18 AAC 50.326(j)(3), the standard permit conditions of 18 AAC 50.345 replace the provisions of 40 C.F.R. 71.6(a)(5) – (7).

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

Condition 32, Administration Fees

Legal Basis: This condition requires compliance with the applicable fee requirements in 18 AAC 50.400-403. As stated in 18 AAC 50.326(j)(1), the provisions of 18 AAC 50.400 through 50.430 are applicable and 40 C.F.R. 71.9 is not applicable.

Factual Basis: Paying administration fees is required as part of obtaining and holding a permit with the Department or as a fee for a Department action. The regulations in 18 AAC 50.400-403 specify the amount, payment period, and the frequency of fees applicable to a permit action.

Conditions 33 and 34, Emission Fees

Legal Basis: These conditions require compliance with the applicable fee requirements in 18 AAC 50.410-420. The regulations specify the time period for the assessable emissions and the methods the Permittee may use to calculate assessable emissions. As stated in 18 AAC 50.326(j)(1), the provisions of 18 AAC 50.400 through 50.430 are applicable and 40 C.F.R. 71.9 is not applicable.

Factual Basis: The Department used the language in SPC I, adopted by reference under 18 AAC 50.346(b), for the permit. SPC I requires 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 assessable emissions are the lesser of the stationary source's potential or projected emissions of each air pollutant at 10 tons per year or greater (AS 46.14.250(h)(1)).

SPC I also allows the Permittee to recalculate the stationary source's assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1), assessable emissions are based on each air pollutant. Therefore, fees shall be paid on any pollutant emitted whether or not the permit contains any limitation for that pollutant.

This standard condition specifies that, unless otherwise approved by the Department, calculations of assessable emissions must be based on actual emissions for the previous calendar year. Since each current year's assessable emissions 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.

SPC I language has been modified as follows:

- In Condition 34.1, electronic submittal options were added and the Department's address for hardcopy submittal was updated; and
- In Condition 33, Footnote 10 was added to clarify a payment exemption for a stationary source that has not commenced construction or operation on or before March 31st of the current reporting year, provided that the Permittee submits a certified letter indicating that the assessable emissions for the source is zero for the previous fiscal year.

Condition 35, Good Air Pollution Control Practice

Legal Basis: This condition requires compliance with the requirements in 18 AAC 50.346(b)(5) and applies to all emissions units, **except** those subject to an emission standard in 40 C.F.R. 60, 61, or 63, those subject to continuous emission or parametric monitoring requirements, and insignificant emissions units.

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

Beyond as noted above, the Department has determined that this standard condition adequately meets the requirements of 40 C.F.R. 71.6(a)(3). No additional emissions 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 as modified meets the requirements of 40 C.F.R. 71.6(a)(3).

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 an adequate maintenance schedule is not maintained.

Condition 36, Dilution

Legal Basis: This condition reiterates 18 AAC 50.045(a), which prohibits the Permittee from using dilution as an emission control strategy. 18 AAC 50.045 is included in the SIP approved by EPA and, therefore, is an applicable requirement, per 40 C.F.R. 71.2.

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

Condition 37, Reasonable Precautions to Prevent Fugitive Dust

Legal Basis: This condition reiterates 18 AAC 50.045(d), which requires a person to use reasonable precautions when handling, storing or transporting bulk materials or

engaging in an industrial activity. 18 AAC 50.045 is included in the SIP approved by EPA and, therefore, is an applicable requirement, per 40 C.F.R. 71.2.

This requirement applies because the Permittee has an emission unit or activity listed under Table 7 of 18 AAC 50.346(c). The listed emission units and activities in Table 7 are: coal-fired boilers; coal handling facilities; construction of gravel pads or roads that are part of a permitted stationary source or other construction that has the potential to generate fugitive dust that reaches ambient air; commercial/industrial/municipal solid waste, air curtain, and medical waste incinerators; sewage sludge incinerators not using wet methods to handle that ash; mines; urea manufacturing; soil remediation units; or dirt roads under the control of the operator with frequent vehicle traffic.

Factual Basis: The Department used the language in SPC X for the permit. The condition requires the Permittee to take reasonable action to prevent particulate matter from being emitted into the ambient air in accordance with 18 AAC 50.045(d).

Condition 38, Stack Injection

Legal Basis: This condition reiterates 18 AAC 50.055(g), which 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). 18 AAC 50.055 is included in the SIP approved by EPA and, therefore, is an applicable requirement, per 40 C.F.R. 71.2.

Stack injection requirements apply to stacks of emissions units at a stationary source constructed or modified after November 1, 1982.

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

Condition 39, Air Pollution Prohibited

Legal Basis: This condition requires compliance with 18 AAC 50.110. 18 AAC 50.110 is included in the SIP approved by EPA and, therefore, is an applicable requirement, per 40 C.F.R. 71.2. 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. The Department also included permit conditions for MR&R as required by 40 C.F.R. 71.6(a)(3) and 71.6(c)(1).

Factual Basis: The Department used the language in SPC II for the permit. This condition spells out how to monitor, record, and report prohibited air pollution. While the other permit conditions and emissions limitations 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 must submit copies of these records upon request of the Department.

Condition 40, Asbestos NESHAP

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 41, Open Burning

Legal Basis: The condition requires the Permittee to comply with the regulatory requirements in 18 AAC 50.065 when conducting open burning at the stationary source. 18 AAC 50.065 is included in the SIP approved by EPA and, therefore, is an applicable requirement, per 40 C.F.R. 71.2. The state open burning regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the stationary source.

Factual Basis: The Permittee may conduct open burning by following the provisions of 18 AAC 50.065 and by following the Department guidelines posted at the website <http://dec.alaska.gov/air/air-permit/open-burn-info>. Condition 41.1 requires the Permittee to keep records to demonstrate compliance with the standards for conducting open burning.

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 57.

Condition 42, Requested Source Tests

Legal Basis: The Permittee is required to conduct source tests as requested by the Department. This requirement is under 18 AAC 50.220(a) and 50.345(k), which are included in the SIP approved by EPA.

Factual Basis: This condition applies because this is a standard condition to be included in all operating permits, as specified in 18 AAC 50.345(a). Compliance is demonstrated through the submission of the required source test plan and report.

Conditions 43 through 45, Operating Conditions, Reference Test Methods, Excess Air Requirements

Legal Basis: Conditions 43 and 45 require compliance with the applicable requirements in 18 AAC 50.220(b) and (c)(3), which are included in the SIP approved by EPA. Condition 44 specifies source test methods, as required by 40 C.F.R. 71.6(a)(3)(i) and 71.6(c)(1). These requirements apply because the Permittee is required by the permit to conduct source tests or a source test may be requested by the Department. The Permittee is required to conduct source tests in the manner set out in Conditions 43 through 45.

Factual Basis: These conditions supplement the specific monitoring requirements stated elsewhere in this permit.

Condition 46, Test Exemption

Legal Basis: This condition incorporates the source test exemption in 18 AAC 50.345(a) regarding visible emissions observations. 18 AAC 50.345(a) is included in the SIP approved by EPA.

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 47 through 50, Test Deadline Extension, Test Plans, Notifications and Reports

Legal Basis: Conditions 48 through 50 require compliance with the applicable requirements in 18 AAC 50.345(m) through (o), which are included in the SIP approved by EPA. Condition 47 contains the requirement in 18 AAC 50.345(l). The requirements in 18 AAC 50.345(l) through (o) constitute standard conditions that must be included in each operating permit, as specified in 18 AAC 345(a). These requirements apply because the Permittee is required to conduct source tests as set out by this permit or as requested by the Department.

Factual Basis: These standard conditions supplement specific monitoring requirements stated elsewhere in this permit.

Condition 51, Recordkeeping Requirements

Legal Basis: This condition requires the Permittee to keep records in accordance with 40 C.F.R. 71.6(a)(3)(ii), which the Department adopted by reference under 18 AAC 50.040(j)(4). It also incorporates the general NSPS recordkeeping requirement under 40 C. F. R. 60.7(f), which the Department adopted by reference under 18 AAC 50.040(a)(1).

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 evidence of compliance with this requirement.

40 C.F.R. 60.7(f) requires records retention for at least two years of the measurements required to be maintained by this Part while 40 C.F.R. 71.6(a)(3)(ii) requires at least five years of records retention. The five-year records retention requirement in Condition 51 satisfies both 40 C.F.R. 60.7(f) and 40 C.F.R. 71.6(a)(3)(ii).

Condition 52, Certification

Legal Basis: All operating permits must contain a requirement to certify any permit application, report, affirmation, or compliance certification, per 18 AAC 50.345(j) and with the certification requirement in 18 AAC 50.205. Both requirements are part of the SIP approved by EPA.

Factual Basis: The requirement in 18 AAC 50.345(j) is a standard condition that must be included in each operating permit, as specified in 18 AAC 50.345(a). 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 operating 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 53, Submittals

Legal Basis: This condition requires the Permittee to comply with the standardized reporting requirements 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 reports, compliance certifications, and other submittals required by this permit, either electronically or by hard copy. This condition supplements the standard reporting and notification requirements of this permit.

Condition 54, Information Requests

Legal Basis: All operating permits must include a condition that requires the Permittee to furnish certain information upon request, per 18 AAC 50.345(i). The requirement is part of the SIP approved by EPA.

Factual Basis: The requirement in 18 AAC 50.345(i) is a standard condition that must be included in each operating permit, as specified in 18 AAC 345(a). This condition requires the Permittee to submit information requested by the Department.

Condition 55 and Section 12, Excess Emission and Permit Deviation Reports

Legal Basis: This condition requires the Permittee to comply with the requirements in 18 AAC 50.235(a)(2) and 18 AAC 50.240(c). 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 used the language in SPC III for the permit condition. The Department used the notification form in SPC IV (see Section 12) for the notification requirements.

Condition 56, Operating Reports

Legal Basis: This condition requires compliance with the applicable requirement in 18 AAC 50.346(b)(6). The condition specifies reporting requirements as required by 40 C.F.R. 71.6(a)(3)(iii)(A) and 71.6(c)(1).

Factual Basis: The Department used the language in Standard Permit Condition VII for the permit condition. The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit.

The condition specifies that for the transition periods between an expiring permit and a renewal permit, the Permittee shall ensure that there is date-to-date continuity between the expired permit and the renewal permit such that the Permittee reports against the permit terms and conditions of the permit that was in effect during those partial date periods of the transition. No format is specified. The Permittee may provide one report accounting for each permit term or condition and the effective permit at that time. Alternatively, the Permittee

may choose to provide two reports: one accounting for reporting elements of permit terms and conditions from the end date of the previous operating report until the date of expiration of the old permit, and a second operating report accounting for reporting elements of terms and conditions in effect from the effective date of the renewal permit until the end of the reporting period.

Condition 57, Annual Compliance Certification

Legal Basis: This condition requires compliance with the requirements in 40 C.F.R. 71.6(c)(5), which the Department adopted by reference under 18 AAC 50.040(j).

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification.

Condition 57.2 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 report electronically at its discretion.

Condition 58, Emission Inventory Reporting

Legal Basis: This condition requires the Permittee to submit emissions data to the state so the state is able to satisfy the federal requirement to submit emission inventory data from point sources as required under 40 C.F.R. 51.321. The emission inventory requirement applies to sources defined as point sources in 40 C.F.R. 51.50. The state must report all data elements in Tables 2a and 2b of Appendix A to Subpart A of 40 C.F.R. 51 to EPA.

Factual Basis: The Department used the language in SPC XV, as adopted by reference under 18 AAC 50.346(b)(8), for the permit condition. 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.

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)). Permittees have four months to compile and submit the data to the Department, but the April 30th due date provides scant time for the Department to transfer the data into EPA's electronic reporting system. To expedite the process, the Department, therefore, encourages Permittees to submit the emission inventory through the Department's electronic emission inventory submission system found in the Point Source Emission Inventory under Air Online Services (<http://dec.alaska.gov/applications/air/airtoolsweb>). This website provides the instructions and emission inventory report forms required by this condition. A detailed instruction on development and submission of the Emission Inventory is available at the following address

<http://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory> by clicking Emission Inventory Instructions button.

Actual measurement with continuous emissions monitoring systems (CEMS) is the preferred method of calculating emissions from a source. If CEMS data is not available, other means for determining actual emissions may be utilized, such as an enforceable test method described in 18 AAC 50.220, material balance calculations, emission factors from EPA's AP-42, or other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided. If necessary, detailed sample calculations representative of the processes may be submitted with the emission inventory, thus, providing verifiable reported emissions and eliminating the need for additional information requests.

To ensure that the Department's electronic system reports complete information to the National Emissions Inventory, Title V stationary sources classified as Type A in Table 1 of Appendix A to Subpart A of 40 C.F.R. 51 are required to submit with each annual report all the data elements required for the Type B source triennial reports (see also Tables 2a and 2b of Appendix A to Subpart A of 40 C.F.R. Part 51). All Type A sources are also classified as Type B sources. However, the Department has streamlined the reporting requirements so Type A sources only need to submit a single type of report every year instead of both an annual report and a separate triennial report every third year.

Based upon the potential emission estimates shown in Table A, the stationary source is a Type B source, so the inventory is due only once every three years.

The Department used the language in SPC XV for the permit condition, but corrected the emissions threshold amount for Pb in Condition 58.2.a(i), from 5 TPY to 0.5 TPY actual emissions. The Department has also added Conditions 58.3 and 58.4 to clarify the requirements for report submittal using the Department's Air Online Services (AOS) system, or using email or mailing out hard copy if the AOS system is not available.

Condition 59, NSPS and NESHAP Reports

Legal Basis: The Permittee is required to provide the Federal Administrator and Department a copy of each emissions unit report for units subject to NSPS or NESHAP federal regulations under 18 AAC 50.326(j)(4). 40 C.F.R. 70 Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001.

Factual Basis: The condition supplements the specific reporting requirements in 40 C.F.R. 60, 40 C.F.R. 61, and 40 C.F.R. 63. The reports themselves provide monitoring for compliance with this condition.

Conditions 60 through 62, Permit Changes and Revisions Requirements

Legal Basis: 40 C.F.R. 71.6(a)(8), (12), and (13), incorporated by reference under 18 AAC 50.040(j), require that these provisions be included in operating permits.

Factual Basis: 40 C.F.R. 71.6(a)(12) and (13), as reflected in Conditions 61 and 62, respectively, specify changes that may be made without a permit revision, and 40 C.F.R. 71.6(a)(8) (Condition 60) states permit revisions are not required for some emissions trading and similar programs.

The Permittee did not request trading of emission increases and decreases as described in 40 C.F.R. 71.6(a)(13)(iii); therefore, language addressing these provisions has not been included in this permit as part of Condition 60.

Condition 63, 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 accordance with the operating permit program. The obligations for a timely and complete operating permit application are in 40 C.F.R. 71.5(a) – (c), adopted by reference in 18 AAC 50.040(j)(3), and 18 AAC 50.326(c).

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 40 C.F.R. 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 remits 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, as long as an application has been submitted within the timeframe specified 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.

Conditions 64 through 69, General Compliance Requirements and Schedule

Legal Basis: These conditions require compliance with the applicable requirements in 18 AAC 50.345(b) through (d) and (h) and 40 C.F.R. 71.6(c)(3). As stated in 18 AAC 50.345(a), the requirements in 18 AAC 50.345(b) through (d) and (h) are standard conditions that must be included in all operating permits issued by the Department.

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