

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

Public Comment - April 8, 2010

**Alaska Electric Light & Power Company
Lemon Creek Standby Generation Station**

**STATEMENT OF BASIS
of the terms and conditions for
Permit No. AQ0209TVP03**

**Reviewed by Mary Grimes
ADEC AQ/APP (Fairbanks)**

Prepared by Weston Solutions, Inc.

INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. AQ0209TVP03.

STATIONARY SOURCE IDENTIFICATION

Section 1 of Operating Permit No. AQ0209TVP03 contains information on the stationary source as provided in the Title V permit application.

The stationary source is owned and operated by **Alaska Electric Light & Power Company**, the Permittee for the stationary source's operating permit. The SIC code for this stationary source is 4911, Electric Services.

The stationary source is a standby electric generation station including nine (9) diesel-fired reciprocating internal combustion engine-generator sets and two (2) diesel fired gas turbine generator sets. The stationary source operates in Juneau, Alaska.

EMISSION UNIT INVENTORY AND DESCRIPTION

Under 18 AAC 50.326(a), the Department requires operating permit applications to include identification of all emissions-related information, as described under 40 C.F.R. 71.5(c)(3).

The emission units at the **Lemon Creek Standby Generation Station** that are classified and have specific monitoring, recordkeeping, and reporting requirements are listed in Table A of Operating Permit No. AQ0209TVP03.

Table A of Operating Permit No. AQ0209TVP03 contains information on the emission units regulated by this permit as provided in the application. The table is provided for informational and identification purposes only. Specifically, the emission unit rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

A summary of the potential to emit (PTE)¹ and assessable PTE as indicated in the application and recalculated by the contractor for the Department from the **Lemon Creek Standby Generation Station** is shown in the table below.

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

Pollutant	NOx	CO	PM-10	SO ₂	VOC	HAPs	Total
PTE	1,622	336	29	308	36	1.3	2,333
Assessable PTE	1,622	336	29	308	36	0	2,331

¹ *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 16.1 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 B are estimates that are for informational use only. The listing of the emissions does not create an enforceable limit to the stationary source.

For criteria pollutants, emissions are based on information provided in the application and recalculated for the Department, as follows: nitrogen oxides (NO_x) based on company provided data in the application; and carbon monoxide (CO), volatile organic compounds (VOC), and PM₁₀ based on United States Environmental Protection Agency's (USEPA) Compilation of Stationary Source Emission Factors (AP-42) emission factors for large diesel generator engines Section 3.4 of AP-42 dated (10/96) and for gas turbines Section 3.1 is dated (4/00).

The HAP emissions are based on information provided in the application and recalculated for the Department using the AP-42, for large diesel generator engines Section 3.4 of AP-42 dated (10/96) and for gas turbines Section 3.1 is dated (4/00).

The Lemon Creek Standby Generation Station is classified as Prevention of Significant Deterioration (PSD) Major as defined in 18 AAC 50.306 because it has the potential to emit more than 250 TPY of a regulated air contaminant in an area classified as attainment or unclassifiable. However, the Lemon Creek Standby Generation Station has never undergone a PSD review because the stationary source was in full operation before 1977, and accepted owner requested limits to avoid project classification for modifications after August 8, 1980 as PSD significant. Through this permit, the Lemon Creek Standby Generation Station avoids a PSD review for NO_x through the implementation of owner requested limits.

BASIS FOR REQUIRING AN OPERATING PERMIT

In accordance with AS 46.14.130(b), an owner or operator of a Title V source² must obtain a Title V permit consistent with 40 C.F.R. Part 71, as adopted by reference in 18 AAC 50.040.

Except for sources exempted or deferred by AS 46.14.120(e) or (f), AS 46.14.130(b) lists three categories of sources that require an operating permit:

- A major source;
- A stationary source including an area source subject to federal new source performance standards under Section 111 of the Clean Air Act or national emission standards under Section 112 of the Clean Air Act;
- Another stationary source designated by the federal administrator by regulation.

This stationary source requires an operating permit because it is classified under 18 AAC 50.326(a) and 40 C.F.R. 71.3(a) as:

- A major stationary source as defined in Section 302 of the Clean Air Act that directly emits, or has the potential to emit, 100 TPY or more of any air pollutant.

² *Title V source* means a stationary source classified as needing a permit under AS 14.130(b) [ref. 18 AAC 50.990(111)].

AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

The most recent permit to operate issued for this stationary source is Permit to Operate No. 9311-AA001. This permit-to-operate included all construction authorizations issued through November 9, 1994, and was issued before January 18, 1997 (the effective date of the new divided Title I/Title V permitting program). All stationary source-specific requirements established in this permit are included in the new operating permit as described in Table C.

Title I Construction and Minor Permits

The Department issued no construction permits for this stationary source after January 17, 1997 (the effective date of the new divided operating and construction-permitting program).

The Department issued Minor Permit No. AQ0209MSS01 to this stationary source on November 12, 2009. The Department refined and updated stationary source-specific requirements in this Title I permit to avoid PSD. Terms from this minor permit are included in the new Title V operating permit as described in Table D.

Title V Operating Permit Application, Revisions and Renewal History

The owner or operator submitted an initial application for these activities on December 4, 1997. The application was amended on March 4, 1998. The Department determined the application was complete on March 6, 1998. Additional information was received after the March 6, 1998, completeness letter. The Department issued the initial Title V Operating Permit No. AQ0209TVP01 on June 21, 2000. Permit No. AQ0209TVP01 Administrative Revision 1 was issued on November 14, 2000 to correct typographical errors. Permit No. AQ0209TVP01 Administrative Revision 2 was issued on August 9, 2002 to update the condition concerning emission fees in the permit to the standard permit condition for emission fees. This standard condition was adopted by reference into 18 AAC 50 effective May 3, 2002.

The owner or operator submitted a permit renewal application on December 1, 2004, which was received on December 7, 2004 by the Department. This application was deemed complete on January 6, 2005. Permit No. AQ0209TVP02 was public noticed on January 14, 2005. The Department issued the renewal Title V Operating Permit No. AQ0209TVP01 on April 18, 2005, with an expiration date of May 17, 2010. The Permittee requested a minor operating permit modification in a minor permit application dated March 10, 2009. The Department issued a Final Air Quality Control Minor Permit, Permit No. AQ0209MSS01 on November 12, 2009.

The owner or operator submitted a permit renewal application on November 10, 2009. The Department issued an Incompleteness Letter on December 17, 2009 requesting additional information. The application was amended January 11, 2010. The Department received additional information on February 12, 2010. The Department determined the application was complete on February 12, 2010.

COMPLIANCE HISTORY

The stationary source has operated at its current location since 1969. Review of the permit files for this stationary source, which includes the past inspection reports and compliance evaluations indicate a stationary source generally operating in compliance with its operating permit. In 2009, after an avalanche that disrupted electricity production in the area, the stationary source operated

EU IDs 6-12 above the operational limits in AQ0209TVP02 in order to handle increased electric demand. AEL&P then applied for a minor permit to adjust the PSD avoidance limits for the Lemon Creek diesel generators. This permit (AQ0209MSS01) was issued on November 12, 2009 and has been incorporated into this renewal permit.

APPLICABLE REQUIREMENTS FROM PRE-CONSTRUCTION PERMITS

Incorporated by reference at 18 AAC 50.326(j), 40 C.F.R. Part 71.6 defines “applicable requirement” to include the terms and conditions of any pre-construction permit issued under rules approved in Alaska’s State Implementation Plan (SIP).

Alaska’s SIP included the following types of pre-construction permits:

- Permit-to-operate issued before January 18, 1997 (these permits cover both construction and operations);
- Construction Permits issued after January 17, 1997; and
- Minor permits issued after October 1, 2004.

Pre-construction permit terms and conditions include both source-specific conditions and conditions derived from regulatory applicable requirements such as standard conditions, generally applicable conditions and conditions that quote or paraphrase requirements in regulation.

These requirements include, but not limited to, each emission unit- or source-specific requirement established in these permits issued under 18 AAC 50 that are still in effect at the time of this operating permit issuance. Table C and Table D below list the requirements carried over from Permit to Operate No. 9311-AA001, and Minor Permit No. AQ0209MSS01 into Operating Permit No. AQ0209TVP03 to ensure compliance with the applicable requirements.

Table C - Comparison of Previous Permit-to-Operate No. 9311-AA001 Conditions to Operating Permit No. AQ0209TVP03 Conditions³

Permit No. 9311-AA001 Condition No.	Description of Requirement	Permit No. AQ0209TVP03 Condition No.	How Condition was Revised
Introductory Paragraph and Exhibit A	Authority for permit and emission unit list	Section 2 – Table 1 and SOB	Same Information, except fugitive emission units deleted because of insignificance.
1	Comply with ambient air quality standards and increments	NA	Now only required by construction permits
2 and Exhibit B	Comply with most stringent emission standards, limits and specifications.	Section 3	Same emission limits as Permit AQ0209TVP02, excepting the reinstatement of the 0.3% fuel sulfur limit from Exhibit B. See Table D for conditions revisions.
3	O & M to provide optimum control of emissions	18	Standard Good Air Pollution control Practices condition
4.	Fuel consumption limit on turbines and notify when 75% of limit is exceeded.	10	Same emission limits as Permit AQ0209TVP02. See Table E for conditions revisions.
5	Timing of requested source test	27	Same as permit AQ0209TVP02
6	Test at maximum capacity	28	Same as permit AQ0209TVP02
7	Submit test plan	33	Same as permit AQ0209TVP02, with minor text revisions
8	Format and timing of test	35	Same as permit AQ0209TVP02, with minor text revisions
9	Notify of excess emissions within 12 hours	40	Same as permit AQ0209TVP02
10	Access provisions	52	Not revised
11	Submit annual operating report	41	Same as permit AQ0209TVP02, with minor text revisions
12	Maintain records in active for 1-year and have accessible for 3 years.	36	Same as permit AQ0209TVP02, with minor text revisions
13	Display permit	NA	Same as permit AQ0209TVP02

Table D - Comparison of Minor Permit No. AQ0209MSS01 Conditions to Operating Permit No. AQ0209TVP03 Conditions⁴

Permit No. AQ0209MSS01 Condition No.	Description of Requirement	Permit No. AQ0209TVP03 Condition No.	How Condition was Revised
1.2	Revised NOx PSD Avoidance Limit – Limit Unit ID 6 MW-hrs plus 4.93 times the total MW-hrs from Unit IDs 7 through 12 to no more than 21,000 MW-hrs in any 12 consecutive months.	9.2., 9.3.c., 9.4.a., 9.5. 9.5.g.	Current permit (AQ0209TVP02) Conditions - 7.2., 7.3.c., 7.4.a., 7.5 – have the multiplier revised from 4.29 to 4.93 in the respective conditions in the renewal permit AQ0209TVP03, as a result of stack test NO _x emission rate change from 0.0339 to 0.039 lb/kW-h. Current permit (AQ0209TVP02) Condition - 7.5.g. – revises NO _x emission factor from 0.0339 to 0.039 lb/kW-h.

NON-APPLICABLE REQUIREMENTS

Each permit is required to contain a discussion of all applicable requirements as set forth in 40 C.F.R. 71.6(a) adopted in 18 AAC 50.040(j). This section discusses standard conditions that have been removed from the permit or are not included for specific reasons.

- NSPS Subpart GG – Standards of Performance for Stationary Gas Turbines – The gas turbines located at the Lemon Creek facility have not been constructed, modified or reconstructed as defined by Subpart GG since the rule applicability date of October 3, 1977. The rule therefore does not apply to EU IDs 5 & 6.
- NSPS Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines - On July 11, 2006, the NSPS for Compression Ignition (CI) Internal Combustion Engines (ICE) - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines was published in the Federal Register as a final rule. The rule applies to owners or operators of stationary CI ICE that commence construction, modification or reconstruction after July 11, 2005 and to manufacturers of 2007 and later model year CI ICE. This rule does not apply to the EU IDs 1-3, 7-12 because they have not been modified or reconstructed since the Subpart applicability date. Should it become applicable, AEL&P shall comply with the requirements in a timely fashion.
- NSPS Subpart KKKK: Although the Permittee has two gas turbines (EU IDs 5 & 6), they are not currently subject to the provisions of this Subpart as the turbines have not been modified or reconstructed since the Subpart applicability date.
- NESHAP Subpart YYYY: Source EU IDs 5 & 6 (gas turbines) are located at a stationary source which that is not major for HAPs, and therefore not subject to the subpart.
- NESHAP Subpart ZZZZ: Source EU IDs 1 - 3 and 7 - 12 (CI ICE) are located at stationary source that is not major for HAPs, and there are currently no applicable requirements for

⁴ This table does not include all standard and general conditions.

existing compression ignition stationary RICE units at area sources of HAPS under 40 CFR 63.6590(b)(3).

- 40 C.F.R. 64 Compliance Assurance Monitoring (CAM): Not an affected facility, operation, or industry.

STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The state and federal regulations for each condition are cited in Operating Permit No. AQ0209TVP03. The Statement of Basis provides the legal and factual basis for each term and condition as set forth in 40 C.F.R. 71.6(a)(1)(i).

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

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

- 18 AAC 50.055(a) applies to the operation of fuel-burning equipment and industrial processes. EU ID(s) 1 - 3 and 5 - 12 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).

Visible emission monitoring, recordkeeping, and reporting scheme is the same for both applicable requirements. The Permittee must monitor, record, and report emissions in accordance with Conditions 2 through 4 of the permit.

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

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 – 7, 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.

- EU ID(s) 1-3 and 5-12 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 nor industrial processes to violate this standard.

MR&R requirements are listed in Condition 6.

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:

Condition 7 identifies visible emissions 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 8, 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.

- EU IDs 1-3 and 5-12 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:

Sulfur dioxide comes from the sulfur in the liquid hydrocarbon fuel (e.g. diesel or no. 2 fuel oil). Fuel containing no more than 0.75 percent sulfur by weight will always comply with the emission standard. AEL&P Lemon Creek is limited to using fuel with a sulfur content of 0.3% or less by Condition 10 at the stationary source. Fuel testing or a statement of fuel sulfur content from the supplier will verify compliance. For liquid fuel, the Permittee must record and report the fuel sulfur content of each shipment.

For oil fired fuel burning equipment, the MR&R conditions are Standard Permit Conditions 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 8.2 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.

The standard condition was streamlined to reflect that an enforceable limit on fuel sulfur content exists in Condition 10. This condition was modified since the fuel sulfur content should never exceed the State Standard as governed by this limit.

Beyond as noted above, the Department has previously determined that the standard conditions as modified adequately meet the requirements of 40 C.F.R. 71.6(a)(3).

Condition 9, NO_x PSD Avoidance

Legal Basis: These conditions are carried over from Air Quality Permit to Operate No. 9311-AA001 as owner requested limits to avoid a PSD review for NO_x. Minor Source Permit No. AQ0209MSS01, issued November 12, 2009 revised the diesel engine emission factor (EU IDs 7-12) from 0.0339 to 0.039 lb NO_x/kW-hr based on stack test results. The Multiplier used to calculate NO_x emissions from EU IDs 6-12 has been revised from 4.29 to 4.93 as a result of the emission factor change. 40 C.F.R. 71.6(a)(3)(i)(B) requires permits to contain “periodic monitoring sufficient to yield reliable data from the relevant time period.” Periodic source testing will provide relevant data to ensure actual emission remain below the limits in Condition 9.

Factual Basis: The Lemon Creek Standby Generation Station is classified a PSD Major as defined in 18 AAC 50.306 because it has the potential to emit more than 250 TPY of a regulated air contaminant in an area classified as attainment or unclassifiable. However, the Lemon Creek Standby Generation Station has never undergone a PSD review because the stationary source was in full operation before 1977. Subsequent modifications were coupled with owner requested limits to avoid PSD classification.

Condition 9.1 contains an owner-requested limit of 207 TPY NO_x in terms of a MW-hr limit, which is applicable to only Unit ID 5. This limit keeps the stationary source from falling under the definition of a PSD modification in 18 AAC 50.306.

Condition 9.2 contains an owner-requested limit of 83 TPY in terms of a MW-hr limit, which is applicable to Unit IDs 6-12 (43 TPY of that 83 TPY came from the removal of an older diesel and the remaining 40 TPY is the limit to avoid PSD review for these units). This limit keeps the stationary source from falling under the definition of a PSD modification in 18 AAC 50.306. The Permittee may not cause or allow Units ID 6 through 12 to violate this limit.

The limits of 207 TPY and 83 TPY NO_x were expressed as a fuel consumption limit in Permit to Operate No. 9311-AA001. In the initial operating permit, the TPY limits for NO_x were converted from a fuel limit to MW-hr limits by use of applicant supplied emission factors. The resulting limits are: 52,400 MW-hr per 12 months for Unit ID 5, and 21,000 MW-hr per 12 months for Unit IDs 6 through 12, with Unit IDs 7 through 12 using the revised multiplier of 4.93. The emission factor for diesels and turbines are 0.039 and 0.0079

lb NO_x/kW-hr, respectively. Since the diesel's (ID 7-12) emission factor is 4.93 times that for the turbine (ID 6), the MW-hr from Unit ID 7-12 has the 4.93 multiplier. Unit 6 is a combustion turbine that has not yet been tested. Terms were added in Condition 9.6.a to perform periodic re-verification of emissions factors used in NO_x calculations.

The NO_x emission factors for the diesels can be off by more than 10%, so Condition 9.5 requires Permittee to source test for NO_x emissions when the MW-hr from the combination of Unit IDs 6-12 reaches 18,900 MW-hr per 12 months. In addition, this permit requires periodic source testing of EU ID 6 and one of EU IDs 7-12 every 5 years.

Condition 10

Legal Basis: This condition is carried over from Air Quality Permit to Operate No. 9311-AA001.

Factual Basis: This condition prohibits the burning of liquid fuel with a sulfur content greater than 0.3%. This limit originated in Permit to Operate No. 9311-AA001, but was not carried over in AQ0209TVP01 or AQ0209TVP02. The Statement of Basis for those permit notes that the fuel sulfur limit was changed from 0.3% to 0.5% but does not provide any basis for that change. Therefore, the original limit is reinstated in AQ0209TVP03. Since only Ultra-Low Sulfur Diesel (ULSD) fuel is now available to AEL&P, which is significantly below these limits, the Department re-imposed the condition for accuracy and completeness, and streamlining.

Condition 11, 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 11.4.a requires certification that the units did not exceed state emission standards during the previous year and did not emit any prohibited air pollution.

Conditions 12 - 14, 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 15, 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 16 - 17, 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 17.2 such that it referenced “submitted” (i.e., postmarked) rather than “received” in accordance with the timeframe of Condition 17.1.

Condition 18, Good Air Pollution Control Practice

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.346(b)(5) and applies to all emission units, **except** those subject to federal emission standards, those subject to continuous emission or parametric monitoring, and for insignificant emission units.

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

The Department adopted this condition under 18 AAC 50.346(b) as Standard Permit Condition VI 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 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 maintenance has been deferred.

Condition 19, 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 21, 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 22, 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 23, Technology-Based Emission Standard

Legal Basis: The Permittee is required to take reasonable steps to minimize emissions if certain activity causes an exceedance of any technology-based emission standard in this permit. This condition ensures compliance with the applicable requirement in 18 AAC 50.235. Technology Based Emission Standard requirements apply to the stationary source because the stationary source contains equipment subject to a technology-based emission standard, such as BACT, MACT, LAER, NSPS or other “technologically feasible” determinations.

Factual Basis: The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with Condition 43. Excess emission reporting under Condition 81 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 43.

Condition 24, 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 25, Refrigerant Recycling and Disposal

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.040(d) and applies if the Permittee engages in the recycling or disposal of certain refrigerants. The condition requires the Permittee to comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F that will apply if the Permittee uses certain refrigerants.

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 this federal regulation.

Condition 26, NESHAPs Applicability Determinations

Legal Basis: This condition requires the Permittee to keep and make available to the Department copies of the major stationary source determination and applicability of specific federal regulations that may apply to its stationary sources.

Factual Basis: The Permittee has conducted an analysis of the stationary source and determined that it is not a major HAPs stationary source based on emissions. This condition requires the Permittee to keep and make available to the Department copies of the major stationary source determination.

Conditions 27 - 28, Halon Prohibitions

Legal Basis: These prohibitions apply to all stationary sources that use halon for extinguishing fires and inert gas to reduce explosion risk. The condition prohibits the Permittee from causing or allowing violations of these prohibitions. The **Lemon Creek Standby Generation Station** uses halon and is therefore subject to the federal regulations contained in 40 C.F.R. 82.

Factual Basis: These conditions incorporate applicable 40 C.F.R. 82 requirements. The Permittee may not cause or allow violations of these prohibitions.

Condition 29, Open Burning

Legal Basis: This 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 29.1 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 45.

Condition 30, 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 31 - 33, 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 31 through 33.

Factual Basis: These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with Conditions 31 through 33 consist of the test reports required by Condition 38.

Condition 34, 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 35 - 38, 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 39, 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 40, 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 41, 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 of 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 42, 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 43, 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 12, 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 44, 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 the Standard Permit Condition VII as adopted into regulation on August 20, 2008 pursuant to AS 46.14.010(e). The Department has made a correction to the Standard Permit Condition VII by changing the number of copies of documents to be submitted from “an original and two copies” to “an original and one copy”. 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 45, 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 45.2 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 original and one copy of an annual compliance certification report. The Permittee may submit one of the required copies electronically at their discretion. 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 46, NSPS and NESHAP Reports

Legal Basis: The Permittee is required to provide the federal Administrator and Department a copy of each emission 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.

Condition 47, Permit Applications and Submittals

Legal Basis: The Permittee may need to submit permit applications and related correspondence.

Factual Basis: Standard Permit Condition XIV directs the applicant to send copies of all application materials required to be submitted to the Department directly to the EPA, in electronic format if practicable. This condition shifts the burden of compliance from the Department to ensure that copies of application materials are submitted to EPA by transferring that responsibility to the Permittee.

Conditions 48 - 50, 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 51, 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 52 - 55, General Compliance Requirements

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.

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

Conditions 56, Permit Shield

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.326(j).

Factual Basis: The Permittee did not request any permit shields.