

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

**Public Comment - May 20, 2010  
Alaska Electric Light & Power  
Auke Bay Generation Station**

**STATEMENT OF BASIS  
of the terms and conditions for  
Permit No. AQ0208TVP03**

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## INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. AQ0208TVP03.

### STATIONARY SOURCE IDENTIFICATION

Section 1 of Operating Permit No. AQ0208TVP03 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 and Alaska **Electric Light & Power** is the Permittee for the stationary source's operating permit. The SIC code for this stationary source is 4911 - Electrical Services; 2211 - Electrical Power Generation, Transmission, and Distribution.

The **Auke Bay Generation Station** is a standby power plant that provides electric backup power for the Auke Bay area of Juneau. The stationary source contains one diesel-electric generator set and two oil-fired gas turbines. The stationary source also includes a 125,000-gallon fixed roof tank used to store No. 2 distillate fuel oil.

Alaska Electric Light & Power is an investor-owned electric utility serving Juneau, Alaska. Normally, 98 percent of Alaska Electric Light & Power's power supply comes from hydroelectric plants. As the largest hydro plants are located in remote locations, Alaska Electric Light & Power provides three fossil-fuel standby power plants in Juneau with the capacity to completely replace the two largest hydro projects. These installations, comprised of diesel engines and gas turbines, predominantly operate during the infrequent interruptions in hydroelectric power supply due to transmission line damage, equipment failure, and maintenance outages and for short term peak use. The emphasis for Alaska Electric Light & Power is on providing several fossil-fuel electrical generating units with large short-term capacity but low total annual production.

The Auke Bay Generation Station currently has two gas turbines (23.6 MW and 2.8 MW) and a 2.6 MW diesel engine generator set. The Auke Bay Generation Station is a synthetic minor source under the provisions established in the program for the Prevention of Significant Deterioration (PSD). Permit limitations assure this synthetic minor source classification (less than 250 tons per year of any regulated pollutant) and are based on a formula restricting the electrical output of the stationary source, directly, and of each unit, indirectly. Each generating unit operates independently and exhausts through its own stack. The generating units are fueled with No. 2 distillate oil (diesel) stored in a 125,000-gallon fixed roof tank.

### 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 Auke Bay Generation Station that are classified and have specific monitoring, recordkeeping, and reporting requirements are listed in Table A of Operating Permit No. AQ0208TVP03.

Table A of Operating Permit No. AQ0208TVP03 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)<sup>1</sup> and assessable PTE as indicated in the application from the Auke Bay Generation Station is shown in the table below.

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

Pollutant	NO <sub>x</sub>	CO	PM-10	SO <sub>2</sub>	VOC	HAPs	Total
PTE	249.90	67.95	32.00	162.96	8.92	0.68 <sup>b</sup>	522.18 <sup>b</sup>
Assessable PTE	249.90	67.95	32.00	162.96	0.00	0.00	512.81

Table Notes:

(a) - This stationary source is a minor source of HAPs.

(b) - The Total HAPs for this stationary source are 0.68 tpy. Of this total, 0.45 tpy are non-VOC HAPs and are included in the Total PTE. The other 0.23 tpy are HAPs that are VOCs and are included in the VOC PTE column. The 0.23 tpy of HAPs that are VOCs and are not included in the Total PTE column because this would result in double counting.

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 as provided in the application, as follows: NO<sub>x</sub>, CO, PM-10, and VOC were calculated using U.S. EPA AP-42 emission factors. SO<sub>2</sub> was calculated assuming 4% sulfur by weight for No. 2 distillate fuel oil.

The HAP emissions were calculated using U.S. EPA AP-42 emission factors.

### BASIS FOR REQUIRING AN OPERATING PERMIT

In accordance with AS 46.14.130(b), an owner or operator of a Title V source<sup>2</sup> 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;

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

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

- 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.

## AIR QUALITY PERMITS

### Previous Air Quality Permit to Operate

The most recent permit issued for this stationary source is Permit to Operate No. 9411-AA004, issued March 18, 1994. 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 permit for this stationary source after January 17, 1997 (the effective date of the new divided operating and construction-permitting program). The Department issued no minor permit for this stationary source after September 30, 2004.

### Title V Operating Permit Application, Revisions and Renewal History

The owner or operator submitted an initial Title V operating permit application on December 4, 1997. The application was amended on April 30, 1998. Additional information was received after the March 6, 1998 completeness letter. The Department issued the initial Title V Operating Permit 208TVP01 on July 14, 2000. Permit 208TVP01 Administrative Revision 1 was issued on November 20, 2000 to correct typographical errors. Permit 208TVP01 Administrative Revision 2 was issued on November 22, 2002 to update the condition concerning emission fees in the permit to the standard permit condition for emission fees which was adopted by reference into 18 AAC 50 effective May 3, 2002.

The owner or operator submitted a first renewal Title V operating permit application on December 1, 2004. The Department issued Operating Permit AQ0208TVP02 on April 18, 2005.

The owner or operator submitted a permit renewal application on October 28, 2009.

## COMPLIANCE HISTORY

The stationary source has operated at its current location since 1983. 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.

Transmission line damage from the avalanches disrupted the flow of hydroelectric power from the Snettisham hydro project to Juneau for six weeks in 2008. In the Title V Operating Permit renewal application submitted by **Alaska Electric Light & Power** on October 27, 2009, the Permittee indicated that the NO<sub>x</sub> PSD limits were not exceeded.

**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 below lists the requirements carried over from Permit to Operate No. 9411-AA004 into Operating Permit No. AQ0208TVP03 to ensure compliance with the applicable requirements.

**Table C - Comparison of Previous Permit-to-Operate No. 9411-AA004 Conditions to Operating Permit No. AQ0208TVP01 Conditions, and Operating Permit No. AQ0208TVP02 Conditions to Operating Permit No. AQ0208TVP03 Conditions<sup>3</sup>**

Permit No. 9411-AA004 Condition No.	Description of Requirement	Permit No. AQ0208TVP01 Condition No.	How Condition was Revised	Permit No. AQ0208TVP02 Condition No.	How Condition was Revised	Permit No. AQ0208TVP03 Condition No.	How Condition was Revised
Introductory Paragraph and Exhibit A	Authority for permit and emission unit list	Section 2 and Table 1	Same information, except different format	Table 1 and SoB	Same information, except deleted fugitive emissions since insignificant	Table A and SoB	Same as AQ0208TVP02
1	Comply with ambient air quality standards and increments	Condition 19	Do not interfere with attainment or maintenance of air quality standards or maximum allowable ambient concentrations	N/A	Deleted, now required only for construction permits	N/A	Deleted, now required only for construction permits. Same as AQ0208TVP02.

<sup>3</sup> This table does not include all standard and general conditions.

Permit No. 9411-AA004 Condition No.	Description of Requirement	Permit No. AQ0208TVP01 Condition No.	How Condition was Revised	Permit No. AQ0208TVP02 Condition No.	How Condition was Revised	Permit No. AQ0208TVP03 Condition No.	How Condition was Revised
Exhibit B (E)	Comply with most stringent emission standards, limits, & specifications	Section 5	Emission limits unchanged and now listed as conditions. Fuel oil sulfur limit dropped from 0.5% to 0.4%	Section 4	Same as Permit No. AQ0208TVP01 with clarification of language for fuel testing sulfur content	Section 3	Same as AQ0208TVP02, with revised fuel oil testing method options
Exhibit B (E)	Fuel type limitation	None	Fuel type limited to No. 2 diesel fuel.	None	None	Condition 10	A condition was added to the permit to limit fuel usage for EU IDs 1-3 to No. 2 diesel fuel to be consistent with Permit No. 9411-AA004.
3	O & M to provide control of emissions	Condition 17	Same requirement but text condensed	Condition 15	Changed to the standard condition for Good Air Pollution Control Practices	Condition 18	Changed to the standard condition for Good Air Pollution Control Practices
4	Fuel consumption limit on turbines and notify when 90% of limit is exceeded	Condition 8 and 9	Fuel consumption changed to MWH limit and source testing required when 90% of limit is reached	Condition 7	Same as Permit No. AQ0208TVP01 but re-worded	Condition 9	Same as AQ0208TVP02
5	Timing of requested source test	Conditions 26, 28, and 30	Timing not specified in permit	Condition 23	The Department can request source tests	Condition 29	Same as AQ0208TVP02
6	Test at maximum capacity	Condition 27	Capacity not specified in permit	Condition 24	Operations specified for source testing	Condition 30	Same as AQ0208TVP02
7	Submit test plan	Condition 30	Timing of test plan submittal	Condition 29	Same as Permit No. AQ0208TVP01	Condition 35	Same as AQ0208TVP02
8	Format and timing of test report	Condition 32	Format and timing of test report	Condition 31	Same as Permit No. AQ0208TVP01	Condition 37	Format and timing of test report was revised

Permit No. 9411-AA004 Condition No.	Description of Requirement	Permit No. AQ0208TVP01 Condition No.	How Condition was Revised	Permit No. AQ0208TVP02 Condition No.	How Condition was Revised	Permit No. AQ0208TVP03 Condition No.	How Condition was Revised
9	Notify of excess emissions within 12-hours	Condition 38	Notify of excess emissions within 48-hours	Condition 36	Revised for standard condition	Condition 43	Revised for standard condition. The web address for on-line reporting form was added
10	Access provision	Condition 48	Not revised	Condition 45	Not revised	Condition 55	Not revised
11	Submit annual operating report	Condition 39	Operating report is to be submitted semi-annually	Condition 37	Revised for standard condition	Condition 44	Revised for standard condition
12	Maintain records in active file for 1-year and have accessible for 3-years	Condition 37	Keep records for 5-years	Condition 35	Same as Permit No. AQ0208TVP01	Condition 39	Revised for standard condition
13	Display permit.	N/A	Not required by regulation	N/A	Same as Permit No. AQ0208TVP01	N/A	Not required by regulation
14	Notify new owner	N/A	Not required by regulation	N/A	Same as Permit No. AQ0208TVP01	N/A	Not required by regulation
15	Pollution prevention	N/A	Not required by regulation	N/A	Same as Permit No. AQ0208TVP01	N/A	Not required by regulation

### 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 Kb: The fuel tank was constructed in 1983. Per 40 C.F.R. 60.111a(a), this tank is not subject to this rule because No. 2 fuel oil is not considered a *petroleum liquid* as defined.
- NSPS Subpart IIII: Construction of EU ID 1 commenced before July 11, 2005, the unit was manufactured before April 1, 2006, and the unit was not modified or reconstructed after July 11, 2005. Therefore, pursuant to 40 C.F.R. 60.4200(a) this unit is not subject to Subpart IIII.
- NSPS Subpart JJJJ: Construction of EU ID 1 commenced before June 12, 2006 and the unit has not been modified or reconstructed after this date. Therefore, pursuant to 40 C.F.R. 60.4230(a)(4) this unit is not subject to Subpart JJJJ.

- NSPS Subparts GG and KKKK: Per 40 C.F.R. 60.4305(a), EU IDs 2 and 3 are exempt from the requirements of Subparts GG and KKKK because they were originally constructed before October 3, 1977 and February 18, 2005 respectively (constructed in 1975 and 1972, respectively) and have not undergone any modification or reconstruction.
- 40 C.F.R 64 compliance assurance monitoring plans are not required because the significant emission units do not use post-combustion emission control devices.

## STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The state and federal regulations for each condition are cited in Operating Permit No. AQ0208TVP03. 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 are fuel-burning equipment

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

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

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). These conditions have been modified in this permit as follows. The Department added a provision that clarifies the option to continue an established monitoring frequency for renewal permits.

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

### Liquid Fuel-Fired Burning Equipment:

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

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

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

### Conditions 5 - 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 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 Conditions 6 & 7 of the permit.

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 Equipment:

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

### Condition 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 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:

AEL&P Auke Bay is limited to using No. 2 diesel fuel with a sulfur content of 0.4% or less by Condition 10.1 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 10.1. 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 adequately meet the requirements of 40 C.F.R. 71.6(a)(3).

### **Condition 9, NO<sub>x</sub> PSD Avoidance**

**Legal Basis:** This condition is carried over from Air Quality Permit-to-Operate No. 9411-AA004 as owner requested limits to avoid a PSD review for NO<sub>x</sub>.

**Factual Basis:** Condition 9 limits emission of NO<sub>x</sub> to 249.9 TPY, and was carried over from Permit-to-Operate No. 9411-AA004 to avoid classification as PSD major. The limit is applicable to all 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.

However, the old permit specified the limit in terms of annual gallons of fuel consumed. In the initial operating permit the TPY of NO<sub>x</sub> was converted to a 63,250 MW-hr limit by use of emission factors higher than those in AP-42. The emission factors for NO<sub>x</sub> were 0.0339 lb/kW-hr for the diesel engine and 0.0079 lb/kW-hr for the turbines.

The Permittee may not cause or allow their equipment to violate this limit. The emission factors used to set this limit can be off by more than 10%. Therefore, Condition 9.4 has the requirement to source test to get an accurate emission factor when the stationary source is within 90% of the Condition 9.1 limit (i.e. when the stationary source reaches or exceeds 56,925 MW-hr per 12 months). This condition also requires periodic source testing within 5 years of permit issuance.

### **Condition 10, SO<sub>2</sub> PSD Avoidance**

**Legal Basis:** This condition is carried over from Air Quality Permit-to-Operate No. 9411-AA004 as owner requested limits to avoid a PSD review for SO<sub>2</sub>. This condition was revised in Operating Permit No. AQ0208TVP01, which was issued July 14, 2000, by lowering the stationary source fuel sulfur content from 0.5 percent by weight to 0.4 percent.

**Factual Basis:** Condition 10 contains an owner requested limit to avoid PSD for SO<sub>2</sub>. The limit is applicable to all the combustion sources. The 0.4 percent by weight sulfur limit is an owner requested limit to keep the SO<sub>2</sub> emissions below the PSD trigger limit of 250

TPY. As described in the Statement of Basis for AQ0208TVP02, the fuel sulfur concentration and the annual fuel consumption limit, shown as a MWH limit in Condition 9, will keep the SO<sub>2</sub> emission at about 214 TPY. The fuel consumption limit in Condition 9 is based upon limiting the NO<sub>x</sub> emissions. That limit is more restrictive than a limit based solely on SO<sub>2</sub>.

A requirement was added to this permit in Condition 10.2 to limit the fuel type for EU IDs 1-3 to No. 2 diesel fuel. Such a condition was not included in Operating Permit Nos. AQ0208TVP01 and AQ0208TVP02. However, a fuel type limitation was included in Exhibit B (E) of Permit No. 9411-AA004 and is carried forward in this permit. The Permittee uses No. 2 diesel fuel for EU IDs 1, 2, and 3 and therefore is able to comply with this requirement. Additionally, the Permittee has utilized No. 2 diesel fuel in these units since issuance of Permit No. 9411-AA004.

The stationary source complies with the limit in Condition 8 by using No. 2 diesel fuel with a sulfur content of 0.4 percent by weight or less. This condition's monitoring, record keeping, and reporting requirements are included in Condition 8.

### Conditions 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.

EU ID 1, once in compliance with 40 CFR 63 Subpart ZZZZ, will no longer be subject to this condition.

#### **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 20, Reasonable Precautions to Prevent Fugitive Dust**

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

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

#### **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.

### **Conditions 26 - 27, 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 Auke Bay **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 28, Open Burning**

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

**Factual Basis:** No specific monitoring is required for this condition. Condition 28.1 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 29, 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 30 - 32, 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 30 through 32.

**Factual Basis:** These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with Conditions 30 through 32 consist of the test reports required by Condition 37.

### **Condition 33, 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 34 - 37, 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 38, Particulate Matter (PM) Calculations**

**Legal Basis:** This condition requires the Permittee to reduce particulate matter data in accord with 18 AAC 50.220(f). It applies when the Permittee tests for compliance with the PM standards in 18 AAC 50.050 or 50.055.

**Factual Basis:** The condition incorporates a regulatory requirement for PM source tests. This condition supplements specific monitoring requirements stated elsewhere in this permit.

### **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.

The Permittee did not request trading of emission increases and decreases as described in 71.6(a)(13)(iii).

#### **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 - 56, General Compliance Requirements and Schedule**

**Legal Basis:** These conditions ensure compliance with the applicable requirement in 18 AAC 50.326(j)(3). The Permittee is required to comply with these standard conditions set out in 18 AAC 50.345 included in all operating permits. 40 C.F.R. 70 Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001.

**Factual Basis:** These are standard conditions for compliance required for all operating permits. Condition 56 ensures compliance with the requirements of 40 CFR 63 Subpart ZZZZ. The rule became applicable May 3, 2010 and the Permittee must comply by the compliance date of May 2, 2013.

#### **Conditions 57, Permit Shield**

**Legal Basis:** These conditions ensure compliance with the applicable requirement in 18 AAC 50.326(j) and apply because the Permittee has requested that the Department shield the source from the applicable requirements listed under this condition under the Federally approved State operating program effective November 30, 2001

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