Alaska Department of Environmental Conservation
Air Permits Program

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Alaska Electric and Energy Cooperative, Inc.
Nikiski Combined Cycle Plant

STATEMENT OF BASIS
for
Permit No. AQ1190TVP03

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INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. AQ1190TVP03.

STATIONARY SOURCE IDENTIFICATION

Section 1 of Operating Permit No. AQ1190TVP03 contains information on the stationary source as provided in the Title V permit application.

The stationary source, Nikiski Combined Cycle Plant, is owned and operated by Alaska Electric and Energy Cooperative and Alaska Electric and Energy Cooperative, Inc. (AEEC) is the Permittee for the stationary source's operating permit. The standard industrial classification (SIC) code for this stationary source is 4911 Electric Services.

EU IDs 1 through 3 were initially a Cogeneration Plant and part of the Kenai Nitrogen Operations Plant (KNO). These units were included in Operating Permit No. AQ0083TVP01, issued to Agrium U.S. Inc. Agrium requested that the Cogeneration Plant (EU IDs 62 through 64 in AQ0083TVP01) not be included in AQ0083TVP02 because ownership and operation of the Cogeneration Plant was being transferred to AEEC. These units would now operate as a separate stationary source known as the "Nikiski Combined Cycle (NCC) Plant", and the Department issued Operating Permit No. AQ1190TVP01 for this stationary source. More information on disaggregation may be found in the statement of basis for Operating Permit No. AQ1190TVP02.

The Nikiski Combined Cycle Plant produces electricity with a gas-fired turbine and an electric steam turbine generator (STG), which is stepped up to 115 kilovolts and sold to local markets via a high-voltage transmission and distribution system. Steam is produced when the exhaust from the combustion turbine is fed into a heat recovery steam generator (HRSG), which is fitted with supplemental duct burners. The steam produced is fed into the STG that produces electricity. The gas-fired turbine can also operate with a bypass stack without feeding gases into the HRSG.

EMISSIONS 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 CFR 71.5(c)(3).

The emissions units at the stationary source that have specific monitoring, recordkeeping, and reporting requirements are listed in Table A of the operating permit. Table A contains information on the emissions units regulated by the operating permit as provided in the application. The table is provided for informational and identification purposes only. Specifically, the emissions 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 for the stationary source is shown in the table below.

Table C - Emissions Summary, in Tons Per Year (tpy)

Emissions	NOx	CO	PM_{10}	SO_2	VOC	CO_2e[1]	HAPs	Total[2]
PTE	751.7	227.0	28.5	28.1	22.5	478,894	5.8	1,057.8
Assessable PTE	752	227	29	28	23	0	0	1,059

Table Notes:

[1] CO_2e emissions are defined as the sum of the mass emissions of each individual GHG adjusted for its global warming potential.

[2] Total PTE and total assessable PTE shown in the table do not include CO_2e and HAPs.

The assessable PTE listed under Condition 46.1 is the sum of the PTE of each individual air pollutant, other than greenhouse gases (GHGs), for which the stationary source has the potential to emit of 10 tpy or greater. The emissions listed in Table C are estimates that are for informational use only. The listing of the emissions does not create an enforceable limit for the stationary source.

Rather than using the source test emission factor from 1986 for CO PTE for EU ID 1, the Department calculated PTE using the emission factor for water-steam injection from AP 42 Table 3.1-1. For HAP PTE for EU ID 3, the Department calculated PTE using emission factors from AP 42 Table 1.4-3. All other PTE is as provided in the operating permit application.

BASIS FOR REQUIRING AN OPERATING PERMIT

In accordance with AS 46.14.130(b), an owner or operator of a Title V source[2] must obtain a Title V permit consistent with 40 CFR 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 the following 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 (NSPS) under Section 111 of the Clean Air Act or National Emission Standards for Hazardous Air Pollutants (NESHAP) under Section 112 of the Clean Air Act;
- Another stationary source designated by the Federal Administrator by regulation.

[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(22).

[2] *Title V source* means a stationary source classified as needing a permit under AS 46.14.130(b) [ref. 18 AAC 50.990(111)].

The Permittee is required to obtain an operating permit for the stationary source as specified under 18 AAC 50.326(a) and 40 CFR 71.3(a), because the stationary source is a major source. This stationary source is a major source because, as defined in Section 302 of the Clean Air Act, it directly emits, or has the potential to emit, 100 tpy or more of any air pollutant subject to regulation.

AIR QUALITY PERMITS

Permits to Operate

EU IDs 1 and 2 were previously permitted at the Soldotna #1 Power Plant, and EU IDs 1 through 3 were previously permitted at the Kenai Nitrogen Operations Plant as the Cogeneration Plant. However, the Department did not issue any air quality control permits to operate to AEEC for this stationary source.

Title I (Construction and Minor) Permits

Title I permits were issued to previous Permittees for EU IDs 1 through 3. However, this section only addresses Title I permits issued to AEEC for the Nikiski Combined Cycle Plant.

Minor Permit No. AQ1190MSS01. The Department issued this permit on April 25, 2011 for the installation of a two-megawatt diesel generator, a 150 horsepower (hp) firewater pump and a natural gas-fired glycol heater at the Nikiski Combined Cycle Plant. The owner requested limits in this permit enabled the installations to avoid minor permit requirements under 18 AAC 50.502(c)(3). All stationary source-specific requirements established in this permit are included in the operating permit as described in Table D.

Title V Operating Permits

Title V permits were issued to previous Permittees for EU IDs 1 through 3. However, this section only addresses Title V permits issued to AEEC for the Nikiski Combined Cycle Plant.

Operating Permit No. AQ1190TVP01. The Department issued this permit on September 30, 2009.

Operating Permit No. AQ1190TVP02. The Department issued this permit on March 19, 2015.

The Department received the application for Operating Permit AQ1190TVP03 on September 9, 2019. The Permittee amended the application on February 12, 2020.

COMPLIANCE HISTORY

The stationary source has operated at its current location since 2001. The Department sent a letter dated June 17, 2019 to the Permittee for non-compliance with Condition 34 Operating Permit No. AQ1190TVP02 by failing to perform the NESHAP Subpart ZZZZ management practices during 2016 on EU ID 2. The Permittee corrected the error in 2017, and no further compliance action was taken.

Review of other 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.

APPLICABLE REQUIREMENTS FROM PRECONSTRUCTION PERMITS

Incorporated by reference at 18 AAC 50.326(j), 40 CFR Part 71.2 defines "applicable requirement" to include the terms and conditions of any preconstruction permit issued under rules approved in Alaska's State Implementation Plan (SIP).

Alaska's SIP includes the following types of preconstruction permits:

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

Preconstruction 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 are not limited to, each emissions unit- or source-specific requirement established in these permits issued under 18 AAC 50 that are still in effect at the time of issuance of Operating Permit No. AQ1190TVP03. Table D below lists the requirements carried into Operating Permit No. AQ1190TVP03 to ensure compliance with the preconstruction permit requirements.

Table D - Comparison of Minor Permit No. AQ1190MSS01 and Operating Permit AQ1190TVP01 Conditions to Operating Permit No. AQ1190TVP03 Conditions[1]

Condition No.	Description of Requirement	AQ1190TVP03 Condition No.	How Condition was Revised
AQ1190MSS01, Condition 4	Hours of operation limit	15	Not revised.
AQ1190MSS01, Condition 5	Fuel sulfur limits	16 & 17	EU IDs 1, 2, and 3 are included in accordance with Operating Permits AQ1190TVP01 and AQ1190TVP02.
AQ1190TVP01, Condition 8	Fuel use limit	18	Not revised.

Table Note:

[1] This table does not include all standard and general conditions.

NON-APPLICABLE REQUIREMENTS

This section discusses standard conditions and other requirements that are not included in the operating permit for specific reasons.

- **40 CFR 60 Subpart Da:** EU ID 3 was initially constructed in 2000, however, initially none of the steam produced from EU ID 3 was used to generate power for sale. In 40 CFR 60.41Da, "*Electric utility steam-generating unit* means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW net-electrical output to any utility power distribution system for sale." Therefore, EU ID 3 is not an electric utility steam-generating unit as defined in 40 CFR 60.41Da.

- **40 CFR 60 Subpart TTTT:** EU IDs 1 and 3 were constructed prior to the applicability date of January 8, 2014. Therefore, the requirements of the subpart are not applicable.

- **40 CFR 64 Compliance Assurance Monitoring (CAM):** EU ID 1 uses water injection to achieve compliance with the NOx emission limit in NSPS Subpart GG. EU ID 1 also has potential pre-control device emissions of NOx that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. However, NSPS Subpart GG and the operating permit specify a continuous compliance determination method, as defined in 40 CFR 64.1. Therefore, CAM requirements are not applicable.

- **40 CFR 72 through 77:** The definition for *State* in 40 CFR 70.2 contains the following: "For purposes of the acid rain program, the term "State" shall be limited to authorities within the 48 contiguous States and the District of Columbia as provided in section 402(14) of the Act." Therefore, acid rain provisions do not apply to stationary sources in Alaska.

STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The Department adopted regulations from 40 CFR 71, as specified in 18 AAC 50.040(j), in addition to creating state regulations, to establish an operating permit program. The EPA fully approved the Alaska Operating Permit Program on November 30, 2001, as noted in Appendix A to 40 CFR 70. This Statement of Basis, required under 40 CFR 71.11(b), provides the legal and factual basis for each condition of Operating Permit No. AQ1190TVP03. Additionally and as required by 40 CFR 71.6(a)(1)(i), the state and federal regulations for each permit condition are cited in the permit.

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

Legal Basis: These conditions require 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 IDs 1 through 6 are fuel-burning equipment or industrial processes.

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

Factual Basis: Condition 1 prohibits the Permittee from causing or allowing visible emissions in excess of the applicable standard in 18 AAC 50.055(a)(1). MR&R requirements are listed in Conditions 2 through 4 of the permit. These conditions have been adopted into regulation as Standard Permit Condition (SPC) IX.

The Permittee must establish by visual observations, which may be supplemented by other means, such as a defined Stationary Source Operation and Maintenance Program, that the stationary source is in continuous compliance with the state standards for visible emissions.

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

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

Gas-Fired Equipment:

Monitoring – The monitoring of gas-fired emissions units for visible emissions is waived, i.e. no source testing will be required. The Department has found that natural gas-fired equipment inherently has negligible visible emissions. However, the Department can request a source test for particulate matter emissions from any smoking equipment.

Reporting – The Permittee must state in each operating report whether only gaseous fuels were used in the equipment during the period covered by the report.

Liquid Fuel-Fired Equipment:

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

For EU IDs 2 and 5 no visible emissions monitoring is required when these emissions units are insignificant based on potential emissions due to permit conditions that limit hours of operation and fuel consumption. As long as the emissions units do not exceed these limits, they are insignificant by emissions rate as specified in 18 AAC 50.326(e) and no monitoring is required in accordance with Department Policy and Procedure No. 04.02.103, Topic # 3. The Permittee must annually certify compliance with the visible emissions standard based on reasonable inquiry.

For EU ID 4 no visible emissions monitoring is required when this unit is insignificant based on actual emissions. As long as the emissions unit remains insignificant by emissions rate as specified in 18 AAC 50.326(e), no monitoring is required in accordance with Department Policy and Procedure No. 04.02.103, Topic # 3. The Permittee must annually certify compliance with the visible emissions standard based on reasonable inquiry.

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

Reporting – The Permittee is required to report emissions in excess of the state visible emissions standard and deviations from permit conditions. The Permittee is also required to include in the operating report a statement of which visible emissions plan was used for each emissions unit and copies of the results of all visible emission observations.

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

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

- 18 AAC 50.055(b)(1) applies to the operation of fuel-burning equipment and industrial processes. EU IDs 1 through 6 are fuel-burning equipment or industrial processes.

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

Factual Basis: Condition 5 prohibits emissions in excess of the applicable state particulate matter standard. MR&R requirements are listed in Conditions 6 through 8 of the permit. These conditions have been adopted into regulation as SPC IX. The Department

modified these conditions by deleting the requirement to record and report the exhaust stack diameters. These one-time requirements have already been fulfilled.

Gas-Fired Equipment:

Monitoring – The monitoring of gas-fired emissions units for particulate matter is waived, i.e. no source testing will be required. The Department has found that natural gas-fired equipment inherently has negligible particulate matter emissions. However, the Department can request a source test for particulate matter emissions from any smoking equipment.

Reporting – The Permittee must state in each operating report whether only gaseous fuels were used in the equipment during the period covered by the report.

Liquid Fuel-Fired Equipment:

Monitoring – The Permittee is required to either take corrective action, or conduct PM source testing, if opacity threshold values are exceeded. For liquid fuel-burning engines and turbines, the Department set opacity threshold values of 15 percent for stack diameters less than 18 inches and 20 percent for stack diameters equal to or greater than 18 inches. These opacity thresholds are based on a study conducted by the Department in an effort to establish a correlation between opacity and PM. The data was collected from diesel engines of various stack sizes and the results are as follows:

- For stacks normalized to 21 inches – 0.05 gr/dscf corresponds to 27% opacity
- For stacks normalized to 18 inches – 0.05 gr/dscf corresponds to 23% opacity
- For stacks normalized to 12 inches – 0.05 corresponds to 16.8 % opacity
- For stacks normalized to 10 inches – 0.05 corresponds to 14.3 % opacity

This means that the trend line for the complete data set predicts that 20% opacity corresponds to a little less than the PM limit for an 18-inch stack. There may be engines that exceed the thresholds but the intent of the standard condition is not to guarantee that each engine that might exceed the PM standard will be tested. The Department expects few, if any, engines to actually be tested under this condition. What the Department does expect is that with the adopted condition in place, operators that find an opacity above or near the testing threshold will take corrective action necessary to reduce PM emissions. This would achieve the desired environmental outcome without the added cost of testing. The Department expects this to be the case with both thresholds.

The method is premised on the fact that a five percent difference in opacity is distinguishable. The conditions mean that if opacity readings as measured using Method 9 – with all of its limitations – exceed the threshold, the Permittee must either take corrective action or conduct a PM source test. The compliance conditions for PM do not draw a legal conclusion about whether the method shows compliance with the visible emissions standard.

Recordkeeping – The Permittee is required to record the results of PM source tests and visible emissions observations conducted during the source test.

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

Conditions 9 through 14, Sulfur Compound Emissions Standard and MR&R

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

- 18 AAC 50.055(c) applies to the operation of fuel-burning equipment and industrial processes. EU IDs 1 through 6 are fuel-burning equipment or industrial processes.

These sulfur compound standards apply because they are contained in the federally-approved SIP. The Department included permit conditions for MR&R as required by 40 CFR 71.6(a)(3) and 71.6(c)(1).

Factual Basis: The Permittee may not cause or allow the affected equipment to violate the applicable sulfur compound standard. Sulfur dioxide comes from the sulfur in the fuel (e.g. coal, natural gas, fuel oils).

Liquid Fuels:

For oil fired fuel burning equipment, the MR&R conditions are SPCs XI and XII, adopted into regulation pursuant to AS 46.14.010(e).

Gaseous Fuels:

Fuel sulfur testing must be conducted to determine compliance with the SO_2 emission standard. The Permittee must obtain a statement from the fuel supplier semiannually or conduct a semiannual analysis for fuel gas sulfur content using either ASTM D4084, D5504, D4810, D4913, D6228 or GPA Standard 2377, or a listed method approved in 18 AAC 50.035(b)-(c) and 40 CFR 60.17 incorporated by reference in 18 AAC 50.040(a)(1).

The Permittee is required to report excess emissions whenever the fuel combusted causes sulfur compound emissions to exceed the standards in this condition. The Permittee is required to include copies of the records of semiannual statements from the fuel supplier or the sulfur content analysis with the stationary source operating report.

Conditions 15 through 18, Preconstruction Permit Requirements

Legal Basis: The Permittee is required to comply with all stationary source-specific requirements that were carried forward from previous SIP-approved Permits to Operate issued on or before January 17, 1997 and operating permits issued between January 18, 1997 and September 30, 2004, and with all stationary source-specific requirements in EPA PSD permits, SIP-approved construction permits, SIP-approved minor permits, and owner requested limits established under 18 AAC 50.225. These requirements include Best Available Control Technology (BACT) limits, limits to ensure compliance with the

attainment or maintenance of ambient air quality standards or maximum allowable ambient concentrations, and owner requested limits. Requirements from the permits listed above apply because they were originally developed through case-by-case action under a federally-approved SIP or approved operating permit program.

Factual Basis: Requirements from Minor Permit No. AQ1190MSS01 are included in the operating permit as noted in Table D. The gallon limit for EU ID 2 was established in a Title I permit for a previous owner. The limit was then carried into Operating Permits No. AQ1190TVP01 and AQ1190TVP02. Therefore, the limit is also included in Operating Permit No. AQ1190TVP03.

Condition 19, Insignificant Emissions Units

Legal Basis: The Permittee is required to meet the state emission standards in 18 AAC 50.050(a) for all incinerators regardless of size and 18 AAC 50.055 for all industrial processes and fuel-burning equipment regardless of size. As previously noted, 18 AAC 50.050(a) and 50.055 are contained in the federally-approved SIP.

Factual Basis: The condition requires insignificant emissions units to comply with the state emission standards for visible emissions, particulate matter emissions, and sulfur-compound emissions. Insignificant emissions units are not generally listed in operating permits unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance. However, the Permittee may not cause or allow insignificant emission units at the stationary source to violate these standards whether or not they are listed in the operating permit.

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. The conditions require certification that the units did not exceed state emission standards during the previous year and did not emit any prohibited air pollution. The Department used the language in SPC V for the permit condition.

Conditions 20 through 29, 40 CFR 60 Subpart A Requirements

Legal Basis: The Permittee must comply with applicable New Source Performance Standard (NSPS) provisions[3]. NSPS requirements are included in the applicable requirement definition under 40 CFR 71.2, which has been adopted by the Department under 18 AAC 50.040(j)(1).

The Permittee must comply with 40 CFR 60 Subpart A if the stationary source is subject to the requirements of another subpart under 40 CFR 60.

[3] EPA has not delegated to the Department the authority to administer the NSPS program as of the issue date of this permit

Conditions 20.1 through 20.3 - The Permittee is subject to these requirements in the event of a new NSPS affected facility[4] or in the event of a modification or reconstruction of an existing facility[5] into an affected facility.

Condition 20.4 - The requirements to notify the Administrator of the date of a continuous monitoring system (CMS) performance demonstration, no less than 30 days before demonstration commences (40 CFR 60.7(a)(5) through (7)) are applicable if a CMS is installed as an NSPS requirement.

Condition 20.5 - The requirements to notify the Administrator of any proposed replacement of components of an existing facility (40 CFR 60.15) apply in the event that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility.

Condition 21 - The requirements in 40 CFR 60.7(b) to maintain start-up, shutdown, or malfunction records are applicable to most NSPS affected facilities.

Conditions 22 and 23 - NSPS excess emission reporting requirements and summary report form in 40 CFR 60.7(c) & (d) are applicable due to the continuous monitoring system for NOx for EU ID 1 for Subpart GG and if the Permittee elects to periodically determine fuel sulfur content under NSPS Subpart GG. The Department has included a copy of the federal EEMSP summary report form as Attachment 1 to the operating permit.

Condition 24 - Recordkeeping requirements in 40 CFR 60.7(f) are applicable to all NSPS affected facilities. Records are requied to be kept for five years in accordance with 40 CFR 71.6(a)(3)(ii)(B) rather than the two years specified in 40 CFR 60.7(f).

Condition 25 - The Permittee has already complied with the initial performance test requirements in 40 CFR 60.8. However, the Permittee is still subject to these requirements in the event of a new NSPS affected facility, in the event of a modification or reconstruction of an existing facility into an affected facility, or at such other times as may be required by EPA.

Condition 26 - Good air pollution control practices in 40 CFR 60.11 are applicable to most NSPS affected facilities.

Condition 27 - states that any credible evidence may be used to demonstrate compliance or to establish violations of relevant NSPS standards.

Condition 28 - Concealment of emissions prohibitions in 40 CFR 60.12 are applicable to most NSPS affected facilities.

[4] *Affected facility* means, with reference to a stationary source, any apparatus to which a standard applies, as defined in 40 CFR 60.2.

[5] *Existing facility* means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type, as defined in 40 CFR 60.2.

Condition 29 - Monitoring requirements in 40 CFR 60.13 are applicable because a CMS is used to determine compliance with Subpart GG emission standards.

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

Condition 30, 40 CFR 60 Subpart GG Requirements

Legal Basis: The Department incorporated the requirements of NSPS Subpart GG by reference, as listed in 18 AAC 50.040(a)(2). Subpart GG applies to stationary gas turbines with a heat input at peak load (maximum load at 60 percent relative humidity, 59 ºF, and 14.7 psi) equal to or greater than 10.7 gigajoules per hour (10 MMBtu/hr), based on the lower heating value of the fuel fired and constructed, modified, or reconstructed after October 3, 1977. Therefore Subpart GG requirements apply to EU ID 1.

Factual Basis: These conditions incorporate NSPS Subpart GG NOx emission and sulfur compound limits.

NOx Standard: For a turbine subject to 40 CFR 60.332, the NOx standard is determined by the following equation:

$$STD_{NO_x} = 0.0075\left(\frac{14.4}{Y}\right) + F$$

Where:

STD_{NOx} = allowable NOx emissions (percent by volume at 15 percent oxygen on a dry basis)

Y = manufacturer's maximum rated heat input (kJ/W-hr), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the affected stationary source. The value of Y shall not exceed 14.4 kJ/W-hr; and

F = NOx emissions allowance for fuel bound nitrogen, percent by volume, assumed to be zero for distillate fuel oil and gaseous fuels.

Based on the manufacturer's heat rating at the rated peak load, and assuming fuel bound nitrogen of zero, the NOx standard is 91 ppmv for EU ID 1.

The Permittee uses water injection to control NOx emissions from EU ID 1. Therefore, the Permittee has developed a parameter monitoring plan, as required by Subpart GG, and monitors water to fuel ratio in accordance with the requirements of the subpart. The monitoring plan submitted in 2010 during the full compliance evaluation states water injection is only required at loads greater than 50 percent.

The Permittee has conducted NOx testing in accordance with the requirements of Subpart GG. Testing conducted in 2010, 2011, and 2016 showed compliance with the NOx standard with the highest test result at 71.9 ppm. Since parameter monitoring is required as noted

above and source testing has shown a significant margin of compliance, the Department is requiring source testing no later than three years after the effective date of the operating permit. This allows for two of the required annual tests to be conducted if the first test result is greater than 90 percent of the limit.

The Subpart GG MR&R conditions do not state how turbine load must be measured. For some turbines, it may be possible to directly measure load as either mechanical or electrical output. For others, it may be necessary to calculate load indirectly based on measurements of other parameters. The Department is not requiring a specific method through permit conditions, but will evaluate the adequacy of the method proposed by the Permittee in the source test plan. Other test requirements and methods are as specified in NSPS Subpart GG.

SO_2 Standard: The Permittee is required to comply with one of the following requirements:

- Do not cause or allow SO_2 emission in excess of 0.015 percent by volume, at 15 percent O_2 and on a dry basis (150 ppmv), or

- Do not cause or allow the sulfur content for the fuel burned in the turbine to exceed 0.8 percent by weight.

MR&R for the sulfur standard is as required in NSPS Subpart GG, which includes the option of an EPA-approved custom fuel monitoring schedule. The technical analysis report for Construction Permit 9923-AC004, which was issued to a previous owner/operator, states, "On January 14, 1998, EPA approved the length-of-stain detector tube protocol covered by ASTM Method D 4810-88 to be used to monitor fuel sulfur for the GE Frame 6B Turbine at the AEG&T Soldotna Plant. The waiver also allows AEG&T to not monitor fuel nitrogen content for the GE Frame 6B Turbine as long as 100% pipeline-quality natural gas is the only fuel being fired. The EPA-approved waiver for fuel sulfur and fuel nitrogen monitoring will transfer to the UNOCAL Kenai Plant Co-Gen Project when the GE Frame 6B Turbine is relocated." Therefore, the custom schedule remained in effect when the turbine was relocated to its current location.

Condition 31, 40 CFR 60 Subpart Db Requirements

Legal Basis: The Department has incorporated by reference the NSPS requirements for specific industrial activities, as listed in 18 AAC 50.040(a). NSPS Subpart Db applies to each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)). EU ID 3 has a heat input capacity greater than 100 MMBtu/hr and was constructed in 2000 by a previous owner to provide steam to the Agrium steam plant. Therefore, the unit is subject to the requirements of Subpart Db.

Factual Basis: These conditions incorporate the Subpart Db NOx emissions standard. A continuous emissions monitor is not required because the unit is fired by a duct burner. The subpart only requires an initial source test, so period source test requirements are added. Source testing has been conducted annually from 2014 through 2019, with the highest

results being 66 percent of the limit. All other test results were less than 30 percent of the limit. Because of this test history, the Department is no longer requiring annual testing. The unit is now to be tested when testing is conducted on EU ID 1.

Condition 32, 40 CFR 60 Subpart IIII Requirements

Legal Basis: The Department has incorporated by reference the NSPS requirements for specific industrial activities, as listed in 18 AAC 50.040(a). NSPS Subpart IIII applies to stationary compression ignition internal combustion engines (CI ICE) that commence construction, modification, or reconstruction after July 11, 2005 where the stationary CI ICE are manufactured after April 1, 2006 for non-fire pump engines and after July 1, 2006 for certified fire pump engines. EU IDs 4 and 5 are subject to the requirements of Subpart IIII because the engines were initially constructed in 2011 and 2012.

Factual Basis: EU ID 4 is a non-emergency engine. EU ID 5 is an emergency firepump engine. These conditions incorporate the applicable Subpart IIII emissions standards. These conditions also specify the MR&R requirements contained in the subpart. The Permittee is required to operate and maintain the stationary CI ICE according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. The hour requirements in 40 CFR 60.4211(f) do not apply to EU ID 5 because the emergency and non-emergency emission standards are the same for this engine. Therefore, the Permittee is meeting the requirements for non-emergency engines for EU ID 5.

Condition 33, 40 CFR 61 Subpart A & M Requirements

Legal Basis: The requirements of 40 CFR 61 are applicable requirements for Title V permitting purposes, as stated in item 4 of the "applicable requirement" definition under 40 CFR 71.2. The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 CFR 61, Subpart M, as adopted by reference under 18 AAC 50.040(b)(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 34, 40 CFR 63 Subpart A Requirements

Legal Basis: The Permittee must comply with applicable National Emission Standards for Hazardous Air Pollutants (NESHAP). NESHAP requirements are included in the "applicable requirement" definition under 40 CFR 71.2, which has been adopted by the Department under 18 AAC 50.040(j)(1).

The Permittee must comply with 40 CFR 63 Subpart A if the stationary source is subject to the requirements of another subpart under 40 CFR 63.

Factual Basis: Subpart A contains general requirements applicable to all facilities and emissions units subject to NESHAP requirements.

Condition 35, 40 CFR 63 Subpart ZZZZ Requirements

Legal Basis: The Department has incorporated by reference the NESHAP requirements for specific industrial activities, as listed in 18 AAC 50.040(c). NESHAP Subpart ZZZZ applies to owners and operators of any existing, new, or reconstructed stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. Nikiski Combined Cycle Plant is an area source that contains RICE units.

Factual Basis: EU IDs 4 and 5 are new CI RICE under NESHAP Subpart ZZZZ. These engines must meet the requirments of 40 CFR 60 Subpart IIII to comply with 40 CFR 63. No other requirements under Subpart ZZZZ apply to these engines.

EU ID 2 is a black start engine under Subpart ZZZZ. This engine must meet the work and management practices for black start stationary CI RICE in Table 2d, Item 4 of Subpart ZZZZ. The general requirement for good air pollution control practices in 40 CFR 63.6605(b) and 63.6625(e) also applies. The Permittee must comply with the recordkeeping requirements of 40 CFR 63.6655(e) and 40 CFR 63.6660. The Permittee is also required to include reports of deviations from NESHAP Subpart ZZZZ requirements with the facility operating reports, in accordance with 40 CFR 63.6650(f).

Under 40 CFR 63.6645(a)(5), initial notification is not required for existing stationary CI RICE that are not subject to any numerical emission standards.

Conditions 36 through 38, 40 CFR 82 Subpart F, G, & H Requirements

Legal Basis: The requirements of 40 CFR 82 are applicable requirements for Title V permitting purposes, as stated in item 12 of the "applicable requirement" definition under 40 CFR 71.2. Condition 36 requires compliance with the applicable requirements in 40 CFR 82, as adopted by reference under 18 AAC 50.040(d). The requirements apply 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 in 40 CFR 82, Subpart F.

Conditions 37 and 38 also require compliance with the applicable requirement adopted under 18 AAC 50.040(d). Condition 37 prohibitions apply to all stationary sources that use substitutes for ozone-depleting compounds. Condition 38 prohibitions apply to all stationary sources that use halon for extinguishing fires and inert gas to reduce explosion risk. These conditions prohibit the Permittee from causing or allowing violations of these requirements.

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. These conditions also incorporate applicable 40 CFR 82 requirements.

Conditions 39 through 41, NESHAP Applicability Determination Requirements

Legal Basis: These conditions require the Permittee to determine NESHAP rule applicability and require recordkeeping for those determinations and notifications as applicable.

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 notify the Department and Administrator if the stationary source becomes an affected source subject to a standard promulgated by EPA under 40 CFR 63 and to keep records of applicability determinations and make those records available to the Department. Notifications of construction are also required as applicable.

Conditions 42 through 44, Standard Terms and Conditions

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

Factual Basis: These are standard conditions that are included in all operating permits.

Condition 45, Administration Fees

Legal Basis: This condition requires compliance with the applicable fee requirements in 18 AAC 50.400 through 403. Paying administration fees is required as part of obtaining and holding a permit with the Department or as a fee for a Department action. As stated in 18 AAC 50.326(j)(1), the provisions of 18 AAC 50.400 through 50.430 are applicable and 40 CFR 71.9 is not applicable.

Factual Basis: The regulations in 18 AAC 50.400 through 403 specify the amount, payment period, and the frequency of fees applicable to a permit action.

Conditions 46 and 47, Emission Fees

Legal Basis: These conditions require compliance with the applicable fee requirements in 18 AAC 50.410 through 50.420. The regulations specify the time period for the assessable emissions and the methods the Permittee may use to calculate assessable emissions. As stated in 18 AAC 50.326(j)(1), the provisions of 18 AAC 50.400 through 50.430 are applicable and 40 CFR 71.9 is not applicable.

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

conditions allow the Permittee to calculate assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1), assessable emissions are based on each air pollutant. Therefore, fees shall be paid on any pollutant emitted whether or not the permit contains any limitation for that pollutant.

This standard condition specifies that, unless otherwise approved by the Department, calculations of assessable emissions based on actual emissions must be for the previous calendar year. Since each current year's assessable emissions are based on the previous year, the Department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match.

Condition 48, Good Air Pollution Control Practice

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

Factual Basis: The condition requires the Permittee to comply with good air pollution control practices. The Department adopted this condition under 18 AAC 50.346(b) as Standard Operating Permit Condition VI pursuant to AS 46.14.010(e). Records kept for units previously subject to this requirement need to be maintained for 5 years even if a unit is no longer subject to this condition.

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

The Permittee is required to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the Department. The Department may use these records as a trigger for requesting source testing if the records show that an adequate maintenance schedule is not maintained.

Condition 49, Dilution

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

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

Condition 50, Reasonable Precautions to Prevent Fugitive Dust

Legal Basis: This condition reiterates 18 AAC 50.045(d), which requires a person to use reasonable precautions when handling, storing or transporting bulk materials or engaging in an industrial activity. This requirement applies because the Permittee has an emission unit or activity listed under Table 7 of 18 AAC 50.346(c). 18 AAC 50.045 is included in the SIP approved by EPA. The listed emission units and activities in Table 7 are: coal-fired boilers; coal handling facilities; construction of gravel pads or roads that are part of a permitted stationary source or other construction that has the potential to generate fugitive dust that reaches ambient air; commercial/industrial/municipal solid waste, air curtain, and medical waste incinerators; sewage sludge incinerators not using wet methods to handle that ash; mines; urea manufacturing; soil remediation units; or dirt roads under the control of the operator with frequent vehicle traffic; and other emission units the Department finds are likely to generate fugitive dust.

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

Condition 51, Stack Injection

Legal Basis: 18 AAC 50.055 is included in the SIP approved by EPA. It is therefore an applicable requirement per 40 CFR 71.2.

This condition requires 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 stacks of emissions units at a stationary source constructed or modified after November 1, 1982.

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

Condition 52, Air Pollution Prohibited

Legal Basis: 18 AAC 50.110 is included in the SIP approved by EPA. It is therefore an applicable requirement per 40 CFR 71.2.

This condition requires compliance with 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. The Department also included permit conditions for MR&R as required by 40 CFR 71.6(a)(3) and 71.6(c)(1).

Factual Basis: The Department used the language in Standard Permit Condition II for the permit. This condition spells out how to monitor, record, and report prohibited air pollution.

While the other permit conditions and emissions limitations should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

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

Condition 53, Technology-Based Emission Standard

Legal Basis: The Permittee is required to take reasonable steps to minimize emissions if certain activities cause an exceedance of any technology-based emission standard in this permit. This condition requires compliance with the requirement in 18 AAC 50.235. Technology-Based Emission Standard requirements apply because the stationary source contains equipment subject to a technology-based emission standard, such as BACT, MACT, LAER, NSPS or any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

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 69. Excess emission reporting under Condition 69 requires information on the steps taken to minimize emissions.

Condition 54, Open Burning

Legal Basis: 18 AAC 50.065 is included in the SIP approved by EPA. The condition requires the Permittee to comply with the regulatory requirements in 18 AAC 50.065 when conducting open burning at the stationary source. The state open burning regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the stationary source.

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

More extensive monitoring and recordkeeping is not warranted because the Permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored.

Condition 55, Requested Source Tests

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

Factual Basis: This condition applies because this is a standard condition to be included in all operating permits, as specified in 18 AAC 50.345(a).

Conditions 56 through 58, Operating Conditions, Reference Test Methods, Excess Air Requirements

Legal Basis: Conditions 56 and 58 require compliance with the applicable requirements in 18 AAC 50.220(b) and (c)(3), which are included in the SIP approved by EPA. Condition 57 specifies source test methods, as required by 40 CFR 71.6(a)(3)(i) and 71.6(c)(1). These requirements apply because the Permittee is required by the permit to conduct source tests, or a source test may be requested by the Department. The Permittee is required to conduct source tests in the manner set out in Conditions 56 through 58.

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

Condition 59, Test Exemption

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

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

Conditions 60 through 63, Test Deadline Extension, Test Plans, Notifications and Reports

Legal Basis: These conditions require compliance with the applicable requirements in 18 AAC 50.345(m) through (o), which are included in the SIP approved by EPA. Condition 60 contains the requirement in 18 AAC 50.345(l). The requirements in 18 AAC 50.345(l) through (o) constitute standard conditions that must be included in each operating permit, as specified in 18 AAC 345(a). These requirements apply because the Permittee is required to conduct source tests as set out by this permit or as requested by the Department.

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

Condition 64, Particulate Matter Calculations

Legal Basis: This condition requires the Permittee to reduce particulate matter data in accordance with 18 AAC 50.220(f), which is included in the SIP approved by EPA. It applies when the Permittee tests for compliance with the particulate matter standards in 18 AAC 50.050 or 50.055.

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

Condition 65, Recordkeeping Requirements

Legal Basis: This condition requires the Permittee to keep records in accordance with 40 CFR 71.6(a)(3)(ii), which the Department adopted by reference under 18 AAC 50.040(j)(4).

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit.

Condition 66, Certification

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

Factual Basis: The Department used the language in SPC XVII, adopted by reference under 18 AAC 50.346(b)(10), for the permit condition. The requirement in 18 AAC 50.345(j) is a standard condition that must be included in each operating permit, as specified in 18 AAC 50.345(a). 18 AAC 50.345(j) allows the excess emissions reports to be certified with the operating report. However, the Department reminds the Permittee that excess emissions reports must be submitted according to the applicable deadline given in Condition 69 and must not be withheld from the Department until the deadline for submittal of an operating report. This condition supplements the reporting requirements of this permit. The certification statement through electronic signature and options for submittal provide paperless options for reporting without compelling Permittees to any specific means of submission.

Condition 67, Submittals

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

Factual Basis: The Department used the language in SPC XVII, adopted by reference under 18 AAC 50.346(b)(10), for the permit condition. This condition lists the Department's appropriate address for reports and written notices. This condition states that the Department requires one certified copy of submitted reports (except as otherwise required by the Department or other conditions of the permit) and provides an allowance for either electronic or hard copy document submittals. The condition also directs the Permittee to refer to the submission instructions on the Department's Standard Permit Conditions webpage for additional information regarding document submittals (e.g., the appropriate Department address).

Condition 68, Information Requests

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

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

Condition 69, Excess Emission and Permit Deviation Reports

Legal Basis: This condition requires the Permittee to comply with the requirements in 18 AAC 50.235(a)(2) and 18 AAC 50.240(c). The condition specifies reporting requirements as required by 40 CFR 71.6(a)(3)(iii) and 71.6(c)(1). Also, the Permittee is required to notify the Department when emissions or operations deviate from the requirements of the permit.

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

The Department used the language in SPC III for the permit condition. The Department used the notification form in SPC IV for the notification requirements.

Condition 70, Operating Reports

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

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

The condition specifies that for the transition periods between an expiring permit and a renewal permit, the Permittee shall ensure that there is date-to-date continuity between the expired permit and the renewal permit such that the Permittee reports against the permit terms and conditions of the permit that was in effect during those partial date periods of the transition. No format is specified. The Permittee may provide one report accounting for each permit term or condition and the effective permit at that time. Alternatively, the Permittee may choose to provide two reports – one accounting for reporting elements of permit terms and conditions from the end date of the previous operating report until the date of expiration of the old permit, and a second operating report accounting for reporting elements of terms and conditions in effect from the effective date of the renewal permit until the end of the reporting period.

Condition 71, Annual Compliance Certification

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

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

Condition 71.2 provides clarification of transition periods between an expiring permit and a renewal permit to ensure that the Permittee certifies compliance with the permit terms and conditions of the permit that was in effect during those partial date periods involved in the transition. No format is specified: the Permittee may provide one report certifying compliance with each permit term or condition for each of the effective permits during the certification period, or may choose to provide two reports – one certifying compliance with permit terms and conditions from January 1 until the date of expiration of the old permit, and a second report certifying compliance with terms and conditions in effect from the effective date of the renewal permit until December 31.

The Permittee is required to submit to the Department an annual compliance certification report. The Permittee may submit the required report electronically at their discretion.

Condition 72, Emission Inventory Reporting

Legal Basis: This condition requires the Permittee to submit emissions data to the state so the state is able to satisfy the federal requirement to submit emission inventory data from point sources to the EPA as required under 40 CFR 51.15 and 51.321. The emission inventory requirement applies to sources defined as point sources in 40 CFR 51.50. The state must report emissions data as described in 40 CFR 51.15 and the data elements in Tables 2a and 2b to Appendix A of 40 CFR 51 Subpart A to EPA.

Factual Basis: The Department used the language in SPC XV, as adopted by reference under 18 AAC 50.346(b)(8), for the permit condition. The emission inventory data is due to EPA 12 months after the end of the reporting year (40 CFR 51.30(a)(1) and (b)(1)). Permittees have until April 30th to compile and submit the data to the Department. To expedite the Department's process of transferring data into EPA's electronic reporting system, the Department encourages Permittees to submit the emission inventory through the Department's electronic emission inventory submission system in the Permittee Portal on the Department's Air Online Services webpage. A myAlaska account and profile are needed to gain access to the Permittee Portal. Other options are to submit the emission inventory via mail, email, or fax.

Detailed instructions on completing and submitting the emission inventory and the report form are available at the Point Source Emission Inventory webpage by clicking the Emission Inventory Instructions button. The emission inventory instructions and report form may also be obtained by contacting the Department.

To ensure that the Department's electronic system reports complete information to the National Emissions Inventory, Title V stationary sources are required to submit with each report emissions data described in 40 CFR 51.15 and the data elements in Tables 2a and 2b to Appendix A of 40 CFR 51 Subpart A, as applicable. Title V stationary sources with potential annual emissions greater than or equal to any of the emission thresholds for Type A (large) sources, as listed in Table 1 to Appendix A of 40 CFR 51 Subpart A, are required

to report emission inventory data every year for the previous calendar year (also known as the inventory year). For triennial inventory years, Type A sources only need to submit one report, not both an annual report and a separate triennial report.

Title V stationary sources with potential annual emissions greater than or equal to any of the emission thresholds for Type B (small) sources, as listed in Table 1 to Appendix A of 40 CFR 51 Subpart A, are required to report emission inventory data every third year (i.e., triennially) for the previous inventory year. The emission thresholds for nonattainment areas vary depending on the nonattainment status of the area. As of June 9, 2017, Fairbanks and North Pole urban area have been designated by the federal administrator as "serious nonattainment" for PM2.5.

As of the issue date of this permit, the stationary source is a Type B stationary source.

Condition 73, NSPS and NESHAP Reports and Waivers

Legal Basis: The Permittee is required to provide the Federal Administrator and Department a copy of each emissions unit report for units subject to NSPS or NESHAP federal regulations under 18 AAC 50.326(j)(4). 40 CFR 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 CFR 60, 40 CFR 61, and 40 CFR 63.

Condition 74, Permit Applications and Submittals

Legal Basis: 40 CFR 71.10(d)(1), adopted by the Department under 18 AAC 50.040(j)(7), requires submission of a copy of each permit application to EPA.

Factual Basis: The Department used the language in SPC XIV, adopted by reference under 18 AAC 50.346(b)(7), for the permit condition. The condition directs the applicant to send a copy of each application for modification or renewal of this permit to the EPA. The information may be submitted in electronic format, if practicable. This condition shifts the burden of compliance with 40 CFR 71.10(d)(1) from the Department to the Permittee as allowed under 40 CFR 71.10(d)(1).

Conditions 75 through 77, Permit Changes and Revisions Requirements

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

Factual Basis: 40 CFR 71.6(a)(12) and (13) specify changes that may be made without a permit revision, and 40 CFR 71.6(a)(8) states permit revisions are not required for some emissions trading and similar programs.

The Permittee did not request trading of emission increases and decreases as described in 40 CFR 71.6(a)(13)(iii).

Condition 78, Permit Renewal

Legal Basis: The Permittee must submit a timely and complete operating permit renewal application if the Permittee intends to continue source operations in accordance with the operating permit program. The obligations for a timely and complete operating permit application are in 40 CFR 71.5(a) through (c), adopted by reference in 18 AAC 50.040(j)(3), and 18 AAC 50.326(c).

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

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

Conditions 79 through 84, General Compliance Requirements and Schedule

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

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

Conditions 85 and 86, Permit Shield

Legal Basis: These conditions require compliance with the requirements in 40 CFR 71.6(f), which the Department has adopted by reference under 18 AAC 50.040(j)(4). These requirements apply because the Permittee has requested that the Department shield the stationary source from specific non-applicable requirements listed under this condition.

Factual Basis: Table B of Operating Permit No. AQ1190TVP03 shows the permit shield that the Department granted to the Permittee. The following table shows the requests that

were denied and the reasons that they were denied. The Department based the determinations on the permit application, past operating permit, likelihood for the source to become subject during the life of the permit, Title I permits and inspection reports.

Table E - Permit Shields Denied

Shield Requested for:	Reason for Shield Request:	Reason for Denial
18 AAC 50.085	No liquid storage tank meets the size or location criteria.	This regulation only applies to storage tanks located in the Port of Anchorage. A shield is not necessary for requirements that are clearly not applicable.
18 AAC 50.090	Stationary source not located in Port of Anchorage and no volatile liquid loading rack that meets throughput criteria.	This regulation only applies to stationary sources located in the Port of Anchorage. A shield is not necessary for requirements that are clearly not applicable.
40 CFR Parts 72, 73, 75, and 77	Emission units in Alaska are not subject to Title IV requirements.	The reason for the shield request does not clearly explain why the acid rain requirements are not applicable.
40 CFR 82, Subparts A through E	Pollutants are not used, handled, or emitted in a manner described in the regulations.	The reason for the shield request does not clearly explain why each specific regulations does not apply.
40 CFR 60.13(e), (f), and (h) for EU ID 1	These regulations pertain to COMS and CEMS. COMS and CEM are not required.	These sections also contain requirements for continuous monitoring systems (CMS), not just CEMS and COMS.
40 CFR 60.13(i)	These regulations pertain to COMS and CEMS. COMS and CEM are not required.	This section addresses Administrator-approved alternatives to monitoring procedures.