Alaska Department of Environmental Conservation
Air Permits Program

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BP Exploration (Alaska) Inc.
BPXA Central Power Station

STATEMENT OF BASIS
of the terms and conditions for
Permit No. AQ0186TVP03

Reviewed by Zeena Siddeek
ADEC AQ/APP (Juneau)

Prepared by Kwame Agyei
ADEC AQ/APP (Juneau)

INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. AQ0186TVP03.

STATIONARY SOURCE IDENTIFICATION

Section 1 of Operating Permit No. AQ0186TVP03 contains information on the stationary source as provided in the Title V permit application.

The stationary source is owned and operated by BP Exploration (Alaska) Inc., ConocoPhillips Alaska, Inc., Chevron USA Inc., and ExxonMobil Corporation. BP Exploration (Alaska) Inc. is the operator and Permittee for the stationary source's operating permit. The Standard Industrial Classification code for this stationary source is 1311 - Crude Petroleum and Natural Gas. The North American Industrial Classification System code for this stationary source is 211111.

The PBU Central Power Station (CPS) produces all the electric power for the Prudhoe Bay Unit (PBU) oil producing facilities. CPS commenced operation in 1974. The stationary source uses a total of seven General Electric Frame 5, Model GE MS 5001 fuel gas-fired turbines. Two of the seven turbines are GE model 5001R and the remaining five units are GE model 5001P. The two model 5001R units drive generators rated at 18.5 megawatts (MW) each and the five model 5001P units drive generators rated at 25 MW each.

Four small black start engines are used to assist in a black start of the two model 5001R units and two of the model 5001P units (source tag numbers GTRB-17-1101, -2101, -3101, and -4101). These engines are used less than a dozen times per year per turbine and operate for a short period of time (historically less than three hours per year each). These units are insignificant emission units based on emissions calculated using their actual hours of operation annually[1] and are *limited-use* designated units.

The CPS receives its fuel gas supply from the PBU Central Gas Facility. The CPS has three fuel gas heaters that are used to raise the fuel gas temperature to the turbines to 80 degrees Fahrenheit (°F). These heaters are fuel gas fired and use a glycol heat exchanger system to heat the fuel gas. The CPS also has two fuel gas module space heaters.

The CPS does not process fluids produced at the PBU and has no flare systems of any type.

The CPS has two diesel-fired emergency generators. These generators are emergency-use only and used periodically to assure electric power availability in the case of a total CPS outage. These reciprocating internal combustion engines (RICE) generators are also brought on line to get Unit Auxiliary Motor Control Centers up and running in order to restart the fuel gas turbines when necessary. These generators have not been run over 100 hours per year, are capped by a 200-hr per year limit in Condition 5, and are *limited-use* designated units.

As set forth in the Statement of Basis for BPXA Flow Station #2 AQ0268TVP01 Revision 1, the CPS has not been aggregated with any other PBU stationary source.

[1] See the additional discussion regarding the IEU status of the black start engines in the Factual Basis for Condition 8.

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 BPXA Central Power Station that are classified and have specific monitoring, recordkeeping, and reporting (MR&R) requirements are listed in Table A of Operating Permit No. AQ0186TVP03.

Table A of Operating Permit No. AQ0186TVP03 contains information on the emission units regulated by this permit as provided in the permit 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)[2] and assessable PTE from the BPXA Central Power Station as indicated in Table C in the permit renewal application is shown in the table below. The Department reviewed the emissions and find them to be satisfactory.

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

Pollutant	NOx	CO	PM-2.5	PM-10	PM	SO_2	VOC	CO_2e	HAPs	Total
PTE	4,696.8	1,029.2	83.1	83.1	83.1	290.5	27.0	1,389,608	19.7	
Assessable PTE	4,697	1,029	Included in PM		83	291	27	N/A	---	6,127

Table Notes:

The HAP_S are VOCs and included in the VOCs. The highest single HAP emissions are 6.6 tpy of formaldehyde.

The assessable PTE listed under Condition 34.1 is the sum of the emissions of each individual regulated air pollutant for which the stationary source has the potential to emit quantities 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 to the stationary source.

The turbine PTE values for EU IDs 3 - 7 for all criteria pollutants except SO_2 are estimated based on AP-42 Tables 3.1-1 and 3.1-2a (April, 2000). The emission factors used to estimate PTE for EU IDs 1 and 2 are the same as those used for EU IDs 3 - 7, except for NOx, where the NSPS Subpart GG NOx limit of 154 ppmv was used. The gas-fired heater PTE values for all criteria pollutants, except SO_2 are estimated based on AP-42 Tables 1.4-1 and 1.4-2 (July, 1998). Engine PTE values for all criteria pollutants except SO_2 are based on an operating time limit of 200 hours per 12 consecutive month period for the emergency generators and an estimate of 100 hours per year for the black start engines, based on AP-42 Table 3.4-1 and AP-42 Table 3.3-1 (October , 1996). All SO_2 PTE values are based on sulfur mass balance and an assumed liquid fuel sulfur content of 0.11% by weight and a limit of 140 ppmv H_2S in the fuel gas.

[2] *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.

HAP emissions from turbines and heaters were estimated using field data from GRI-HAPCalc version 3.01 software and AP-42 emission factors (Table 3.1-3 (4/00) for turbines at loads >80% and Table 1.4-3 (7/98) for heaters). Liquid fuel-fired IC engine HAP emissions were estimated using AP-42 emission factors based on an operating time limit of 200 hours per 12 consecutive month period for the emergency generators and an estimate of 100 hours per year for the black start engines. HAP emissions for tanks were estimated using Tanks 4.09d. Total aggregate HAP emissions are estimated at 19.7 TPY with a maximum single HAP (formaldehyde) emission rate of 6.6 TPY. The CPS is not a major source of HAPs, since the calculated HAP emissions are less than the triggers of 10/25 TPY.

BASIS FOR REQUIRING AN OPERATING PERMIT

In accordance with AS 46.14.130(b), an owner or operator of a Title V source[3] must obtain a Title V permit consistent with 40 C.F.R. 71, as adopted by reference in 18 AAC 50.040.

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

- A major source;
- A stationary source including an area source subject to Federal New Source Performance Standards (NSPS) under Section 111 of the CAA or National Emission Standards for Hazardous Air Pollutants (NESHAP) under Section 112 of the CAA; and;
- 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

EPA Permit PSD-X79-05

EU IDs 1 through 7 at CPS were all originally installed or commenced construction prior to promulgation of the Prevention of Significant Deterioration (PSD) permitting program on August 7, 1977. On May 17, 1979, the Federal PSD permit PSD-X79-05 authorized Sohio (the previous owner) to install two 50 MW generating capacity turbines at CPS. One of these was used as part of the SWAP I-III series revisions made at Prudhoe Bay in the early 1980s. The second was never installed. Instead, under a separate project, Sohio upgraded the existing Frame 5M seventeen MW units to become two 18.5 MW Frame 5R units. This action was not subject to PSD permitting. The two upgraded units (EU IDs 1 and 2) became affected facilities under NSPS Subpart GG at the time of the upgrade.

Permit PSD-X79-05 was amended on August 29, 1997 to clarify the limits and the emission units to which the limits apply. As none of the CPS emission units originally permitted under PSD-

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

X79-05 were installed, no EPA PSD permit emission limits apply to CPS as reflected in the amended permit.

Previous Air Quality Permit to Operate

The most recent permit issued for this stationary source is Permit to Operate No. 9473-AA032, issued on December 27, 1994 and amended on May 1, 1995[4]. 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). This permit-to-operate includes all construction authorizations issued before January 7, 2003. All active stationary source-specific requirements established in this permit-to-operate were included in Operating Permit No. AQ0186TVP01, issued January 7, 2003.

Title I (Construction and Minor) Permits

Construction Permits

The Permittee submitted an application for the initial Title V operating permit and a concurrent construction permit application on November 25, 1997. Additional information was received in January 1998, February 1999, and via email, November 9, 2001. Construction Permit No. 186CP01 was issued concurrently with Operating Permit No. AQ0186TVP01 as a combined Construction and Operating Permit on January 7, 2003.

Construction Permit 186CP01 revised and rescinded portions of Permit-to-Operate 9473-AA032 as documented in Condition 19 of permit 186CP01 and Table B in the Statement of Basis for Permit No. AQ0186TVP01. In summary, the following source-specific limits stated in Permit 9473-AA032 were either revised or rescinded by Permit 186CP01.

- For EU IDs 1 and 2, the CO, PM, and VOC emission factor limits were rescinded. The NOx limit was retained since the basis for the limit is the applicable NSPS Subpart GG NOx standard.
- For EU IDs 3 - 12, the NOx, CO, PM, and VOC emission factor limits were rescinded.
- For EU IDs 13 and 14, the diesel fuel sulfur content limit was rescinded.

The basis for rescinding these limits was that they were carryover conditions from the EPA PSD-X79-05 permit. None of the units in operation at CPS are subject to any limits from the EPA permit. The limits were rescinded because they were not established by a PSD permitting action.

The following source-specific limits and other requirements were carried forward from Permit 9473-AA032 to Permit 186CP01.

- For all fuel gas fired emission units (EU IDs 1 - 12), the fuel gas H_2S content limit of 25 ppmv annual average was revised to 29.9 ppmv annual average. The revised limit was granted by the Department upon approval of air quality modeling demonstrating that the increase in SO_2 emissions associated with the increase in fuel gas H_2S content would not result in a change in air quality above the significant impact levels for SO_2.

[4] The 1995 amendment to the Permit-to-Operate had no bearing on the applicable requirements of the permit, so all citations to the Permit to Operate are for the 1994 version of the permit.

- For EU IDs 13 and 14, an operating time limit of 200 hours per calendar year for each unit. This limit was later revised by Minor Permit AQ0186MSS01 to be based on a 12-consecutive month period.
- For EU IDs 1 through 14, a requirement to monitor, record, and report monthly operating hours.
- For EU IDs 1 through 14, a requirement to monitor, record, and report monthly fuel consumption.

Minor Permits

The Department issued Minor Permit No. AQ0186MSS01 to this stationary source on July 21, 2010 to revise the H_2S limit for fuel gas burned at the Central Power Station from 29.9 ppmv annual average to 140 ppmv not to be exceeded at any time. This permit also revised the operating time limit for EU IDs 13 and 14 from a 200 hour per calendar year per unit to a 200 hour per rolling 12-month period per unit.

Title V Operating Permit Application, Revisions and Renewal History

The Department issued Operating Permit No. AQ0186TVP01 as a combined Construction and Operating Permit on January 7, 2003. The Department amended Permit No. AQ0186TVP01 on August 16, 2010 to incorporate Permit No. AQ0186MSS01 by administrative amendment. BP Exploration (Alaska) Inc. submitted a Title V permit renewal application on August 6, 2007. The Department issued Operating Permit No. AQ0186TVP02 on December 28, 2010.

The Permittee submitted a complete application for renewal Operating Permit No. AQ0186TVP03 on June 17, 2015.

COMPLIANCE HISTORY

The stationary source has operated at its current location since 1974. Review of the permit files for this stationary source, which includes the past inspection reports, indicates a stationary source generally operating in compliance with its operating permit. Full compliance evaluations completed between December 15, 2003 and December 10, 2015 did not discover any compliance issue.

STATIONARY SOURCE-SPECIFIC REQUIREMENTS CARRIED FORWARD FROM PRIOR PERMITS

Incorporated by reference at 18 AAC 50.326(j), 40 C.F.R. Part 71.2 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) and any pre-construction permits issued by the EPA.

Alaska's SIP includes the following types of 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 on or after October 1, 2004.

The 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 stationary 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 D lists the requirements carried over from Permit No. AQ0186TVP02 into Operating Permit No. AQ0186TVP03 to ensure compliance with the applicable requirements.

Table D - Comparison of Permit No. AQ0186TVP02 Conditions to Operating Permit No. AQ0186TVP03 Conditions

Permit No. AQ0186TVP02 Condition No.	Description of Requirement	Permit No. AQ0186TVP03 Condition No.	How Condition was Revised
Section 2	Table A	Section 2	Described emission units into more detail
1.2, 2.2	VE MR&Rs for diesel units	1.2, 2.2	Applied only to EU IDs 13 and 14
3.1	Fuel gas sulfur monitoring	3.5	Revised to semiannual monitoring
3.4, 3.4.a.-d.	North Slope liquid fuel sulfur	3.8, 3.8.a, 3.8.b	Revised to standard permit condition
8	Insignificant emission units	8	Excluded EUs 13-14 from affected units
9	NSPS Subpart A Notification	9	Deleted ‘effective 7/1/07’ from footnote
9.1	Construction date	9.1	Revised ‘commences’ to ‘is commenced’
9.4	Proposed replacement of unit	9.4	Inserted ‘components of’ in first line
11	NSPS Subpart EEMSP Report	11	Revised to match federal language and Custom Fuel Monitoring Schedule
11.1	Excess emissions magnitude	11.1	Deleted ’40 C.F.R. 60.13(h)
11.2	Periods of excess emissions	11.2	Deleted leading word ‘Specific’
12	Summary Report Form	12	Revised title and added a leading phrase
12.1	Duration of excess emissions less than 1 percent	12.1	Replaced ‘Department or EPA’ with ‘Administrator’
13	NSPS Subpart A Source tests	13	Added reference to Conditions 13.1-13.4
No equivalent	Details of source test method	13.1 – 13.4	Added for clarification
14	NSPS Subpart A GAPCP	14	Revised to match federal regulation
17	Subpart GG NOx Standard	17	Simplified language
17.1	Waivers	No equivalent	Deleted
17.2.a	Periodic testing	17.1.a	Added ‘Within 5 years of the latest test’
19	NESHAP Subpart A	19	Deleted Subpart ZZZZ from title
20	NESHAP Subpart ZZZZ	20	Deleted obsolete May 13, 2013 date
No equivalent	GAPCP	22.1	Added, as required by federal rule
No equivalent	Oil Analysis Program	22.4	
No equivalent	Continuous compliance	23	
21.6	Reporting requirements	25	Expanded to include all deviations
22	Recordkeeping requirements	24	Deleted obsolete May 13, 2013 date
22.1	Records of maintenance	24.2	Revised to match federal regulation
22.2	Operating hours records	24.1	Revised to match federal regulation

22.3	Retention of records	24.3	Revised to match federal regulation

Table Notes:
Table does not include conditions that were not revised and generic conditions.

NON-APPLICABLE REQUIREMENTS

This section discusses standard conditions that have been removed from the permit or are not included for specific reasons.

- **40 C.F.R. 64, Compliance Assurance Monitoring:** The requirements of Compliance Assurance Monitoring apply to an emission unit at a stationary source if the emission unit is subject to an emission limitation or standard; uses a control device to comply with the emission limitation or standard; and has potential pre-control device emissions of the regulated air pollutant equal to or greater than the major source thresholds for the regulated air pollutant. The stationary source does not contain any emission unit that fits the Compliance Assurance Monitoring criteria of 40 C.F.R. 64.2(a)(2).
- **40 C.F.R. 68 Chemical Accident Prevention Provisions (Risk Management Plan)**: The stationary source is not subject to the general duty clause under the Clean Air Act Section 112(r)(1) (40 C.F.R. 68.10) because it does not have a threshold quantity of a regulated substance in a process as determined in 40 C.F.R. 68.115.

STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

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). The State and Federal regulations for each condition are cited in Operating Permit No. AQ0186TVP03. This 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: 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)(1) applies to the operation of fuel-burning equipment and industrial processes. EU IDs 1 - 18 are fuel-burning equipment.

U.S. EPA incorporated this standard 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).

MR&R requirements are listed in Conditions 1.1 - 1.2 of the permit.

Gas-Fired Fuel Burning Equipment:

Monitoring – The monitoring of gas-fired emission 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 visible emissions. However, the department can request a source test for visible 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 Burning Equipment:

Monitoring – Condition 1.2 requires the Permittee to certify compliance under Condition 59 with the visible emissions standard.

Emissions from EU IDs 13 and 14 are below the significant emission rate thresholds specified in 18 AAC 50.326(e) when subject to the operational limit in Condition 5. Therefore, no monitoring is required for EU IDs 13 and 14 except as required in Condition 5 in accordance with Department Policy and Procedure No. AWQ 04.02.103, Topic # 3, 6/21/12. EU IDs 15 - 18 are *limited-use* black start units that operate less than 100 hours per year (hr/yr) with actual emissions below the significant emission thresholds of 18 AAC 50.326(e). Therefore, no monitoring is required for EU IDs 15 - 18.

Conditions 2, Particulate Matter (PM) Standard and MR&R

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 IDs 1 - 18 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 2 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 2.1 - 2.2 of the permit. Conditions 2.1 - 2.2 requires the Permittee to certify compliance under Condition 59 with the PM standard.

Gas-Fired Fuel Burning Equipment:

Monitoring – The monitoring of gas-fired emission units for PM is waived, i.e. no source testing will be required. The department has found that natural gas-fired equipment inherently has negligible PM emissions. However, the department can request a source test for PM 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 Burning Equipment:

Monitoring – Conditions 2.1 - 2.2 requires the Permittee to certify compliance under Condition 59 with the PM standard.

Emissions from EU IDs 13 and 14 are below the significant emission rate thresholds specified in 18 AAC 50.326(e) when subject to limits in Condition 5. Therefore, no monitoring is required for EU IDs 13 and 14 except as required in Condition 5 in accordance with Department Policy and Procedure No. AWQ 04.02.103, Topic # 3, 6/21/12. EU IDs 15 - 18 are *limited-use* black start units that operate less than 100 hours per year (hr/yr) with actual emissions below the significant emission thresholds of 18 AAC 50.326(e). Therefore, no monitoring is required for EU IDs 15 - 18.

Condition 3, Sulfur Compound Emissions Standard and MR&R

Legal Basis: This condition requires the Permittee to comply with the sulfur compound emission standard in 18 AAC 50.055(c) for all fuel-burning equipment and industrial processes in the State of Alaska.

- EU IDs 1 – 18 are fuel-burning equipment and industrial processes.

These sulfur compound standard also applies because it is 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 gas and diesel fuel.

Liquid Fuels:

For oil fired fuel burning equipment, the MR&R (Conditions 3.1 – 3.4, 3.8) 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 3.2 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) or*

40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1)". The text *"…or an alternative method approved by the Department"* was discarded during the Revised Action Plan submitted to EPA on July 15, 2007, as a result of the EPA Audit of the September 2006 Title V Program Review. This text is not to be used in subsequent permits since it allows a Permittee to bypass the public process for changing monitoring requirements by submitting off-record requests to change monitoring methods.

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

Gaseous Fuels:

Fuel sulfur testing will verify compliance with SO_2 emission standard. Fuel gas sulfur is measured as hydrogen sulfide (H_2S) concentration in ppm by volume (ppmv). Fuel gas containing no more than 4,000 ppmv H_2S will always comply with this emission standard. This is true for all fuel gases, even with no excess air. Fuel gas with an H_2S concentration of even 400 ppmv is currently not available at the North Slope of Alaska and is not projected to be available during the life of this permit. Since H_2S is capped to 140 ppmv in Condition 4 and the total sulfur threshold of concern is 4,000 ppmv, ADEC allows CPS to continue H_2S sampling to avoid the added cost of both total sulfur and H_2S sampling.

Condition 3.5.b requires the Permittee to conduct a semiannual analysis for the fuel gas H_2S content using ASTM D 4810-88, ASTM D 4913-89, Gas Producer's Association (GPA) method 2377-86, or an alternative analytical method approved by the Administrator.

The Permittee is required to report as State excess emissions whenever the fuel combusted causes sulfur compound emissions to exceed the standard in Condition 3. The Permittee is required to include copies of the records of semiannual statement from the fuel supplier or the sulfur content analysis with the stationary source operating report.

Conditions 4 - 7, Pre-Construction and Stationary Source-Specific Permit Requirements

Legal Basis: The Permittee is required to comply with all effective stationary source-specific requirements that were carried forward from previous EPA PSD permits, SIP approved permits to operate issued before January 18, 1997, SIP approved construction permit(s), SIP approved minor permits, operating permits issued between January 18, 1997 and September 30, 2004, or owner requested limits established under 18 AAC 50.225. These requirements include Best Available Control Technology limits, limits to ensure compliance with the attainment or maintenance of ambient air quality standards or maximum allowable ambient concentrations, and owner requested limits. State pre-construction requirements apply because they were originally developed through case-by-case action under a Federally approved SIP or approved Operating Permit program. EPA approved the latest SIP effective September 13, 2007.

Factual Basis:

Condition 4 incorporates the H_2S content of the fuel gas to 140 ppmv at any time and associated MR&R to protect the 3-hour, 24-hour and annual average SO_2 ambient air quality standards and increments. Condition 5 limits the operation of EU IDs 13 and 14 to 200 hours per consecutive 12-month period to protect the annual average SO_2 ambient air quality standards and increments.

Condition 6 are monitoring and reporting requirements of operating hours for EU IDs 1 through 12. Condition 7 contains monitoring and reporting requirements of fuel consumption for EU IDs 1 through 18. These monitoring requirements are carried over from Permit No. 9473-AA032 at the request of the permittee per the Statement of Basis for AQ0186TVP01.

Conditions 8, 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 and fuel-burning equipment, regardless of size.

Factual Basis: The conditions re-iterate the emission standards and require compliance for EU IDs 15 through 18 and insignificant emission units not listed in the permit. 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 MR&Rs to ensure compliance under these conditions.

Condition 8.4.a requires certification that the units did not exceed state emission standards during the previous year and did not emit any prohibited air pollution. EU IDs 15 - 18 are *limited-use* designated units that operate less than 100 hours per year with actual emissions below the significant emission thresholds of 18 AAC 50.326(e). Therefore, no monitoring is required for EU IDs 15 - 18 in accordance with Department Policy and Procedure No. AWQ 04.02.103, Topic #3, June 12, 2012.

Conditions 9 – 16 NSPS Subpart A Requirements

Legal Basis: The Permittee must comply with those NSPS provisions incorporated by reference the NSPS effective July 1, 2007, for specific industrial activities, as listed in 18 AAC 50.040[5].

Most affected facilities (with the exception of some storage tanks) subject to an NSPS are subject to Subpart A. At this stationary source, EU IDs 1 and 2 are subject to NSPS Subpart GG and therefore subject to Subpart A.

Conditions 9.1 - 9.3 - The Permittee has already complied with the notification requirements in 40 C.F.R. 60.7 (a)(1) & (3) for EU IDs 1 and 2. However, the Permittee is still subject to 40 C.F.R. 60.7 (a)(1), (3) & (4) in the event of a new NSPS affected facility[6] or in the event of a modification or reconstruction of an existing facility[7] into an affected facility.

Condition 9.4 - The requirements to notify the EPA and the Department of any proposed replacement of components of an existing facility (40 C.F.R. 60.15) apply in the event that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility.

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

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

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

Condition 10 - Start-up, shutdown, or malfunction (SSM) record maintenance requirements in 40 C.F.R. 60.7(b) are applicable to NSPS affected facilities subject to Subpart A that do not have the SSM requirements in the NSPS subpart they are subject to.

Conditions 11 and 12 - NSPS excess emission reporting requirements and summary report form in 40 C.F.R. 60.7(c) & (d) are applicable to EU IDs 1 and 2. The Department has included in Attachment A of the statement of basis a copy of the Federal EEMSP summary report form for use by the Permittee. The Permittee obtained EPA approval for annual instead of semi-annual fuel sulfur reporting in a letter from Anita Frankel (EPA Region 10) to Steven Taylor (BP Exploration (Alaska) Inc.) dated May 8, 1996. Therefore, the EEMSP reports that address fuel gas H_2S monitoring for Subpart GG-affected turbines are required to be submitted annually instead of semi-annually.

Recordkeeping requirements in 40 C.F.R. 60.7(f) are applicable to all NSPS affected facilities. (Satisfied by Condition 53)

Condition 13 - The Permittee has already complied with the initial performance test requirements in 40 C.F.R. 60.8 for EU IDs 1 and 2. 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 14 - Good air pollution control practices in 40 C.F.R. 60.11(d) are applicable to NSPS affected facilities subject to Subpart A that do not have the SSM requirements in the NSPS subpart they are subject to. EU IDs 1 and 2 are subject to this condition because 40 C.F.R. 60, Subpart GG does not contain requirements GAPCP.

Condition 15 – The condition states that any credible evidence may be used to demonstrate compliance or establishing violations of relevant NSPS standards for EU IDs 1 and 2.

Condition 16 - Concealment of emissions prohibitions in 40 C.F. R. 60.12 are applicable to EU IDs 1 and 2.

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

Conditions 17 - 18, NSPS Subpart GG Requirements, EU IDs 1 and 2.

Legal Basis: This condition prohibits the Permittee from exceeding emission standards set out in Subpart GG. NSPS 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 pounds per square inch) 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.

Factual Basis: These conditions incorporate NSPS Subpart GG NOx emission and sulfur compound limits. The Permittee may not allow equipment to violate these standards. Per Condition 18.1.a(i) and pursuant to 40 C.F.R. 60.334(h)(3), the owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 C.F.R. 60.331(u),

regardless of whether an existing custom schedule approved by the Administrator requires such monitoring. Per 40 C.F.R. 60.334(i)(3)(i), a custom sulfur monitoring schedule under 60.334(i)(3)(ii)(A) is acceptable without prior Administrative approval.

NO_X Standard: For a turbine subject to 40 C.F.R. 60.332, the NOx standard is determined by the following equation:

$$STD_{NO_x} = 0.015\left(\frac{14.4}{Y}\right) + F$$

Where:

STD_{NO_x} = allowable NOx emissions (percent by volume at 15 percent oxygen and 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. The Permittee elected not to apply a NOx emission allowance for fuel-bound nitrogen.

Based on the manufacturer's heat rating at manufacturer's rated peak load, and assuming fuel bound nitrogen of zero, the NOx standard is 154 ppmv for EU IDs 1 and 2.

SO_2 Standard: The Permittee is required to comply with one of the following sulfur requirements for EU IDs 1 and 2 (turbines):

(1) 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

(2) do not cause or allow the sulfur content for the fuel burned in EU ID(s) < > to exceed 0.8 percent by weight.

The Permittee has elected to comply with the SO_2 standard by not exceeding the 0.8 percent by weight sulfur content in the fuel burned by EU IDs 1 and 2.

Exemptions: Gas turbines exempted from NSPS Subpart GG emission standards are as provided in 40 C.F.R. 60.332(e) – (l).

Condition 17, NOx Monitoring, Recordkeeping, and Reporting

Legal Basis: Periodic monitoring is included in Condition 17.1 for all turbines that normally operate for greater than 400 hours in a 12 month period. This additional monitoring is necessary to ensure that turbine emissions comply with the NSPS NOx standard and is required under 40 C.F.R. 71.6(a)(3) as 40 C.F.R. 60, Subpart GG does not contain MR&R sufficient for an operating permit.

Factual Basis: The Department does not have enough information to make categorical determinations that certain types of turbines, or turbines with emission test results below a certain percentage of the Subpart GG NOx emission limit, will inherently comply with the Subpart GG limit at all times and will never need additional testing. After a sufficient body of NOx data is gathered under monitoring conditions for compliance with 40 C.F.R. 60, Subpart GG, the Department may find that it has enough information to make such

categorical determinations. In that event, the Department would revise the NOx monitoring conditions. The Department may determine that to assure compliance it is necessary to retain or increase the current monitoring frequency.

These conditions do not include the initial NSPS performance test requirements as the Subpart A conditions cover these requirements. If an existing or new turbine under this permit is still subject to the performance test requirement of 40 C.F.R. 60.8 is covered under the Subpart A related conditions.

The intent of these conditions is that turbines or groups of turbines be routinely tested on no less than a 5-year cycle. If the most recent performance test on a turbine showed NOx emissions at less than or equal to 90 percent of the limit shown in Condition 17, then periodic monitoring is required at the first applicable of three criteria: either within 5 years of the last performance test, or within a year of the issue date of the permit, or within a year of exceeding 400 hours of operation within a 12-month period. For clarification, the Department added a 6 month cut-off date for triggering source testing within 1 year after permit issue date in accordance with Condition 17.1.a(i)(B). The 6-month trigger identifies when Condition 17.1.a(i)(C) would be enacted to require source testing within 1 year of triggering 400 hours. This ensures that a unit would not appear to be out of compliance with Condition 17.1.a(i)(B) once it finally triggered Condition 17.1.a(i)(C).

If the most recent performance test showed operations at greater than 90 percent of the emission limit listed in Condition 17, then periodic monitoring source testing is required every year until two consecutive tests show emissions at less than or equal to 90 percent of the limit.

The condition does not state how 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 attempting to dictate what method is most appropriate through the permit condition, but should evaluate the adequacy of methods of calculating load based on the load monitoring proposed by the Permittee.

40 C.F.R. 60, Subpart GG defines "emergency gas turbine[8]" and exempts turbines meeting that definition from the Subpart GG emission standards. Some turbines may be operated as standby equipment but not meet the definition of emergency turbine, so the Department has added a Method 20, or Method 7E and either Method 3 or 3A, monitoring threshold of 400 hours per 12-month period. For turbines expected to operate less than 400 hours the Department has also added recordkeeping for hours of operation. The Department does not intend to require the Permittee to operate a turbine solely for the purpose of testing.

The condition requires testing at a range of loads, consistent with the performance test requirements in Subpart GG, that is, test at within 5 percent at 30, 50, 75, and 90-to-100 percent of peak load or at four evenly-spaced load points in the normal operating range of the gas turbine, including the minimum point in the operating range and 90-to-100 percent of peak load, or at the highest achievable load point if 90-to-100 percent of peak load cannot

[8] Emergency Gas Turbine means any stationary gas turbine that operates as a mechanical or electrical power source only when the primary power source for a facility has been rendered inoperable by an emergency situation, as defined in 40 C.F.R. 60.331(e), effective 7/1/07.

be physically achieved in practice. If testing at four loads is not reasonable, the condition allows the Permittee to propose to the Department what test loads will be reasonable and adequate, and the Department will have the responsibility to make a finding on that proposal. If EPA has already approved alternative test loads for the initial performance test the Department would allow those test loads if the information that went into that decision were still representative of the turbine operation.

In Condition 17.1.b(ii)(C)(4), the Department considers "fuel type" to mean, for liquid fuels a type of fuel as described in an ASTM or similar fuel specification.

Load measurements or load calculations from load surrogate measurements are for one-hour periods or the averaging period for the test method. Method 20 identifies a number of traverse points that vary with the size of the stack. From these points the tester is to choose at least 8 points for NOx measurements. The time at each point is to be at least one minute plus the average response time of the instrument. The recorded value is the average steady state response. Presumably, the steady state response would exclude some or all of the response time of the instrument. Three runs are to be done at each test load.

The three runs would represent 24 minutes of measurement time or more. A one-hour average load is therefore a reasonable approximation of a load period corresponding to the test method.

Condition 18, SO_2 Monitoring, Recordkeeping, and Reporting

Legal Basis: This condition requires the Permittee to comply with NSPS Subpart GG SO_2 or fuel quality monitoring, recordkeeping, and reporting.

Factual Basis: Monitoring, recordkeeping, and reporting requirements for this condition are described in NSPS Subpart GG and have been referenced here. No additional monitoring outside of the Subpart GG requirements is necessary to ensure compliance with the NSPS SO_2 standard.

Monitoring: Condition 18.1 incorporates NSPS Subpart GG fuel sulfur monitoring requirements and the fuel gas monitoring requirements of the EPA approved alternative monitoring plan and schedule granted to the Permittee in accordance with 40 C.F.R. 60.334(i)(3). The approved alternative plan and schedule applies to EU IDs 1 and 2 since these units commenced construction, reconstruction, or modification after October 3, 1977, but before July 8, 2004, per 40 C.F.R. 60.334(h)(4). Per Condition 18.1.a(i) and pursuant to 40 C.F.R. 60.334(h)(3) and 40 C.F.R. 60.334(i), the owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 C.F.R. 60.331(u), regardless of whether an existing custom schedule approved by the Administrator requires such monitoring.

Therefore, no monitoring or reporting of total sulfur content is necessary for NSPS Subpart GG compliance purposes for EU IDs 1 and 2 when they burn natural gas. The Permittee may submit a certified statement to the Department indicating that the fuel gas combusted at the stationary source meets the definition of natural gas in 40 C.F.R. 60.331(u), pursuant to 40 C.F.R. 60.334(h)(3).

The Permittee was granted an EPA-approved Custom Fuel Monitoring Schedule (5/8/96) and Alternate H_2S Sampling Method (10/2/97) allowing the Permittee to determine the fuel

sulfur content of the fuel gas at least monthly using ASTM D 4810-88, ASTM D 4913-89, or Gas Producer's Association (GPA) Method 2377-86. The custom schedule also allows the Permittee to reduce the required frequency for reporting the fuel sulfur content to once per year, instead of the standard semi-annual requirement

However, sulfur monitoring is still required when EU IDs 1 and 2 burn fuel oil.

Recordkeeping: The Permittee is required to maintain records of all sulfur monitoring data required by NSPS Subpart GG for five years as set out in 18 AAC 50.350(h)(5). This requirement is stated in Condition 53.

Reporting: NSPS Subpart GG SO_2 standard reporting requirements are incorporated in the permit in Condition 18.2.a. According to the custom fuel monitoring schedule approved in correspondence dated May 8, 1996, the Permittee is required to submit results of fuel gas H_2S monitoring to EPA at least annually.

For the purpose of the EEMSP reports and summary report required under 40 C.F.R. 60.7(c), report daily periods during which the sulfur content of the fuel being fired in the turbine exceeds 0.8 percent as excess emissions. As stated in Conditions 11, 12, and 57, reports are to be submitted to the Department and EPA, and summarized in the operating report required under Condition 58.

Conditions 19, NESHAP Requirements

Legal Basis: The Department has incorporated by reference the NESHAP requirements for specific industrial activities, as listed in 18 AAC 50.040(c). Most affected facilities subject to a NESHAPs requirement are subject to Subpart A. EU IDs 13 – 18 are subject to NESHAPs Subpart ZZZZ and therefore subject to the general provisions of Subpart A as specified in the provisions for applicability of Subpart A in the corresponding NESHAP subpart (Table 8 of Subpart ZZZZ).

Factual Basis: Subpart A contains the general requirements applicable to all affected facilities (sources) subject to NESHAPs. In general, the intent of NESHAPs is to regulate specific categories of stationary sources that emit or have the potential to emit one or more hazardous air pollutants. The condition requires compliance with the applicable provisions Table 8 to Subpart ZZZZ, which address the portions of 40 C.F.R 63 Subpart A that could apply to engines affected by Subpart ZZZZ.

Conditions 20 - 25, NESHAP Subpart ZZZZ Requirements

Legal Basis: NESHAP Subpart ZZZZ applies to any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand. EUs IDs 13 - 18 are existing stationary RICE located at an area source of HAP emissions.

Factual Basis: These conditions incorporate the Subpart ZZZZ work practice standards applicable to EU IDs 13 - 18. The Permittee is required to operate and maintain the emission units according to the manufacturer's emission-related operation and maintenance instructions; or develop a custom plan, approved by the Department, which provides for the maintenance and operation of the emission units in a manner consistent with good air pollution control practice for minimizing emissions.

EU IDs 13 and 14 are existing stationary source CI RICE designated as emergency use engines by the Permittee and EU IDs 15 through 18 are existing stationary black start CI RICE subject to operation and maintenance requirements as well as associated MR&R requirements in Conditions 20 - 25.

For EU IDs 13 - 18, Conditions 20 - 25 include all applicable standards and MR&R requirements according to engine use (emergency, black start) and ratings set out for existing stationary CI RICE located at an area source of HAP emissions. The Permittee is required to operate and maintain the existing stationary RICE according to the manufacturer's written instructions or procedures developed by the Permittee in a manner consistent with good air pollution control practice for minimizing emissions.

For emergency engines, EU IDs 13 and 14, the Permittee is required to monitor operating time using a non-resettable hour meter in each unit for accurate recording and monitoring to demonstrate compliance with the management practice requirements and operational hour limitations set out for emergency RICE. For stationary emergency RICE, the unit is allowed to operate up to 100 hours per calendar year for maintenance checks and readiness testing unless Federal, State, or local standards require operation beyond 100 hours per year for the same purpose.

The Permittee is also allowed to operate the emergency RICE in non-emergency situations for up to 50 hours per calendar year, as allowed under 40 C.F.R. 63.6640(f). The 50 hours allowed for non-emergency situations are counted towards the 100 hours per year provided for maintenance and testing. There is no time limit on the use of emergency stationary RICE in emergency situations. Should any of the emergency engines no longer meet the criteria for an emergency engine, as defined in 40 C.F.R. 63.6675, the emission unit will need to meet all applicable requirements for non-emergency engines.

For non-emergency black start RICE (EU IDs 15 through 18), the management practice requirements are identical to those of emergency RICE (EU IDs 13 and 14) as set out in Conditions 20 - 25 except for the operating time restrictions in Condition 22.5. By definition, black start engines seldom operate. To qualify as a black start engine under Subpart ZZZZ, the engine’s only purpose must be to start up a combustion turbine.

Per 40 C.F.R. 63.6645(a)(5), the Permittee is not required to submit an initial notification for an existing stationary emergency RICE or existing stationary RICE that is not subject to any numerical emission standards.

Condition 26, 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 27, Protection of Stratospheric Ozone, 40 C.F.R. 82

Legal Basis: Condition 27.1 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.

Conditions 27.2 and 27.3 prohibitions also 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 BPXA Central Power Station uses halon and is therefore subject to the Federal regulations contained in 40 C.F.R. 82.

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 C.F.R. 82 requirements. The Permittee may not cause or allow violations of these prohibitions.

Condition 28, NESHAPs Applicability Determinations

Legal Basis: This condition requires the Permittee to determine rule applicability of NESHAPS, and requires record keeping for those determinations if required by the source classification.

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 facility and to keep and make available to the Department copies of the major stationary source determination.

Condition 29, 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.

Conditions 30 - 32, 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 33, 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 34 - 35, 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 equal to or 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 35.2 such that it referenced "submitted" (i.e., postmarked) rather than "received" in accordance with the timeframe of Condition 35.1.

Condition 36, 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, i.e., except EU IDs 3 - 12.

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). Records kept in accordance with Condition 36.2 for units previously subject to GAPCP need to be maintained for 5 years in accordance with Condition 53 even if a unit is no longer subject to this condition. Beyond as noted above, the Department previously determined that this standard condition adequately meets the requirements of 40 C.F.R. 71.6(a)(3).

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

The Permittee is required to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the Department. The Department may use these records as a trigger for requesting source testing if the records show that maintenance has been deferred.

Condition 37, 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 38, 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.

This condition applies to stationary source operating permits that do not have an approved dust control plan, and are part of a permitted stationary source that has the potential to generate fugitive dust that reaches ambient air or contains dirt roads under the control of the operator with frequent vehicle traffic.

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

The Department adopted this standard condition as Standard Permit Condition X under 18 AAC 50.346(c) pursuant to AS 46.14.010(e). The Department determined that this standard condition adequately meets the requirements of 40 C.F.R. 71.6(a)(3).

Condition 39, 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 emission unit or stack would need to be modified to accommodate stack injection.

Condition 40, 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).

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 41, 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 57. Excess emission reporting under Condition 57 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 57.

Condition 42, 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 42.1 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 59.

Condition 43, 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 44 - 46, 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 44 through 46.

Factual Basis: These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with Conditions 44 through 46 consist of the test reports required by Condition 51.

Condition 47, 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 48 - 51, 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 52, 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. The Permittee must use the equation given in this condition to calculate the PM emission concentration from the source test results. This condition supplements specific monitoring requirements stated elsewhere in this permit.

Condition 53, 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 54, 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 55, 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. Per Department Policy and Procedure Number 04.02.110 effective

September 1, 2014, the Permittee is required to submit one certified (original) 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 56, 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 57, 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 has 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 condition meets the requirements of 40 C.F.R. 71.6(a)(3).

Section 13, Notification Form

The notification form contained in Standard Permit Condition IV meets the requirements of Chapter 50, Air Quality Control.

Condition 58, 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 determined that the standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). The Department deleted the text "*The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports,*

emission source test reports, or other records under a cover letter certified in accordance with Departmental submission requirements." since it duplicates Condition 55.

For renewal permits, 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 59, 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 59.2 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 a certified (original) of an annual compliance certification report. The Department deleted the text "*The Permittee, at their discretion, may submit one copy in electronic format (PDF or other Department compatible image format).*" since it duplicates Condition 55.

Condition 60, Emission Inventory Reporting

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

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

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

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

Condition 61, 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 62 - 64, Permit Changes and Revisions Requirements

Legal Basis: The Permittee is obligated to notify the Department of certain off-permit source changes and operational changes under18 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 conditions are 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 40 C.F.R. 71.6(a)(13)(iii).

Condition 65, 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 40 C.F.R. 71.5(a)(2), a complete renewal application is one that provides all information required pursuant to 40 C.F.R. 71.5(c) and 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 66 - 70, 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.

Conditions 71 - 72, 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 non-applicable requirements listed under this condition under the Federally approved State operating program effective November 30, 2001

Factual Basis: Table B of Operating Permit No. AQ0186TVP03 shows the permit shield that the Department granted to the Permittee.

ATTACHMENT A

FIGURE 1--SUMMARY REPORT--GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

[Note: This form is referenced in 40 C.F.R. 60.7, Subpart A-General Provisions]

Pollutant *(Circle One)*: SO_2 NO_X TRS H_2S CO Opacity

Reporting period dates: From _____ to _____

Company:
Emission Limitation: _____

Address: _____

Monitor Manufacturer: _____

Model No.: _____

Date of Latest CMS Certification or Audit: _____

Process Unit(s) Description: _____

Total source operating time in reporting period [1]: _____

Emission Data Summary [1]	**CMS Performance Summary** [1]
1. Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:
a. Startup/shutdown ..... ____	a. Monitor equipment malfunctions ..... ____
b. Control equipment problems ..... ____	b. Non-Monitor equipment malfunctions ..... ____
c. Process problems ..... ____	c. Quality assurance calibration ..... ____
d. Other known causes ..... ____	d. Other known causes ..... ____
e. Unknown causes ..... ____	e. Unknown causes ..... ____
2. Total duration of excess emissions ..... ____	2. Total CMS Downtime ..... ____
3. Total duration of excess emissions x (100) / [Total source operating time] ..... ____ % [2]	3. [Total CMS Downtime] x (100) / [Total source operating time] ..... ____ % [2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 C.F.R. 60.7(c) shall be submitted.

Note: On a separate page, describe any changes since last quarter in CMS, process or controls.

I certify that the information contained in this report is true, accurate, and complete.

Name: _____

Signature: _____ *Date*: _____

Title: _____