# Alaska Department of Environmental Conservation Air Permits Program

December 30, 2010 BP Exploration (Alaska) Inc., Prudhoe Bay Operations Center / Main Construction Camp (PBOC/MCC)

# STATEMENT OF BASIS of the terms and conditions for Permit No. AQ0274TVP02

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# INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. AQ0274TVP02.

# STATIONARY SOURCE IDENTIFICATION

Section 1 of Operating Permit No. AQ0274TVP02 contains information on the stationary source as provided in the Title V permit application.

The stationary source is owned by BP Exploration (Alaska) Inc., ConocoPhillips Alaska, Inc., Chevron USA Inc., and ExxonMobil Corporation. BP Exploration (Alaska) Inc., is the Permittee for the stationary source's operating permit. The SIC code for this stationary source is 1311. The NAICS code is 211111.

PBOC provides billeting, dining, laundry, and recreational facilities for up to 450 camp residents. The PBOC complex also includes administrative offices, the communication center, water and wastewater treatment plants, an emergency power generation facility, the fire station, a vehicle repair shop, vehicle garages, and the camp maintenance shop. Satellite buildings house a sheet metal shop, vibration shop, and warehouse storage space.

MCC provides billeting, dining, laundry, and recreational facilities for up to 675 camp residents. The complex also includes an infirmary (known as the Medical Clinic) which consists of a trauma bay, examining rooms, offices, an x-ray room, equipment and supply rooms, and billeting rooms for medical staff. The MCC complex also houses administrative offices for engineering and engineering support services. Satellite buildings (U-Buildings) house various shops and warehouses including the radio shop, the Halon shop, the tool room, and the electrical power plant. In the Halon shop, empty Halon bottles from the production facilities are re-filled with Halon 1301 from bulk stores. Halon 1301 is used as an atmosphere inerting and fire-extinguishing agent in the production facilities. Empty dry chemical (Purple K and sodium bicarbonate) fire extinguishers are also refilled in the Halon Shop. An emergency generator permitted under minor permit no. AQ0274MSS01 provides emergency power to a man-camp located on the nearby tarmac. The "Tarmac Camp" generator is considered part of the PBOC/MCC. The Tarmac-Camp is a 212-person modular living facility for BPXA located in close proximity to the PBOC and MCC. The design includes a kitchen dining facility for 400 people, a waste-water facility and a generator system for temporary power.

For operating permit applicability the PBOC/MCC is aggregated with the BPXA Crude Oil Topping Unit (COTU) as described in the Department's North Slope oil and gas aggregation decision in the BPXA Flow Station #1 (AQ0268TVP01 Rev.1) Statement of Basis. The permit terms, limits and emissions represented in this permit for PBOC/MCC represent only those emissions and applicable permit terms for this portion of the stationary source. The stationary source is thus issued multiple permits under the authority of AS 46.14.190(b). The COTU is issued permit number AQ0265TVP02.

# 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 Prudhoe Bay Operations Center / Main Construction Camp (PBOC/MCC) that are classified and have specific monitoring, recordkeeping, and reporting requirements are listed in Table A of Operating Permit No. AQ0274TVP02.

Table A of Operating Permit No. AQ0274TVP02 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 does not create an enforceable limit.

As provided in the application, pertinent operations from an air emissions standpoint for the PBOC/MCC include the two large Cleaver Brooks heaters at MCC (EU IDs 4 through 5), and the emergency power generation facilities (EU IDs 1 through 3, 6 through 8, 10, 11, and 20). The emergency fire water pumps (EU IDs 9, 12, and 13) and the make-up air heater at PBOC (EU ID 21) comprise the remainder of the emission units.

Tanks with the tag number 90-1933 and 90-1934, identified in AQ0274TVP01 as EU IDs 16 and 17, respectively, have been dismantled and removed from the site and are not addressed in AQ0274TVP02. Additionally, tanks with tag numbers 94-1901, 90-1939 (now 90-939), and 90-1940 (now 90-940), are not identified in AQ0274TVP02 as EU IDs 15, 18, and 19, since the tanks are no longer associated with regulatory requirements 40 C. F. R. 60 Subpart K, Ka, and/or Kb. Tank 90-939, EU 18, is subject to the applicable requirements of NESHAP subpart CCCCCC.

EU ID 14 Bayco Incinerator (Tag No. 74-138) was stated as "abandoned in place for eventual dismantling and removal" in the Permittee's application amendment No.2 dated April 28, 2009. ADEC removed this emission unit and all terms and conditions in processing this permit under the application. Compliance inspections will document the removal and/or dismantling of the incinerator.

# EMISSIONS

A summary of the potential to emit (PTE)<sup>1</sup> and assessable PTE as indicated in the permit application and as calculated by the Department from the PBOC/MCC is shown in the table below. The table shows potential to emit from the Prudhoe Bay Operations Center (PBOC), the Main Construction Camp (MCC) and the Crude Oil Topping Unit (COTU), and the assessable emissions from the PBOC/MCC combined.

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

Pollutant	NOx	СО	PM-10	SO <sub>2</sub>	VOC	HAPs <sup>1</sup>	Total
Total Potential Emissions (COTU & PBOC/MCC), (12 consecutive month basis)	223.5	134.0	10.9	15.8	15.9	8.3	400.1
PTE for PBOC and MCC (Calendar year basis)	126.1	60.8	6.2	8.8	7.7		209.6
PTE for COTU (Calendar year basis)	33.9	58.6	2.7	3.9	8.0		107.1
Combined PTE for PBOC, MCC, and COTU (Calendar year basis)	159.9	119.4	8.9	12.7	13.9		314.8
Assessable Emissions - PBOC/MCC only	126.1	60.8	0.0	8.8	7.7	0.0	203.4

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

Notes:

<sup>1</sup> HAP emissions are almost all VOCs, therefore, to avoid double counting HAP emissions are not included in the "Total" column.

The assessable PTE listed under Condition 32.1 is the sum of the PBOC/MCC portion of the calendar year emissions of each individual regulated air pollutant other than CO<sub>2</sub>e for which the stationary source has the potential to emit quantities greater than 10 TPY. The emissions listed in Table D are estimates that are for informational use only. The listing of the emissions does not create an enforceable limit to the stationary source.

# **PBOC and MCC (Criteria Pollutants)**

For emission units 1 through 3, 6 through 11, and 13, there is a 500 hour per calendar year limit (Condition 11). However, these units could operate up to 1,000 hours per any 12 consecutive month period, and still be in compliance with the calendar year limit. Therefore, the PTE for permitting purposes is based on a 1,000 hour annual operating time for these units, while the PTE for fees is based on 500 hours. For EU ID 12, PTE is based on the 100-hour annual non-emergency operating time limit that applies to emergency engines affected by NSPS Subpart IIII. For EU ID 20, PTE is based on the operating time limit of 400 hours per rolling 12-month period as established in Condition 12. For all other PBOC/MCC emission units, emission calculations are based on an assumed 8,760 hours of annual operation.

Except for EU IDs 12 and 20, PTE estimates for all criteria pollutants except  $SO_2$  are based on AP-42 emission factors. Emission estimates for EU IDs 12 and 20 are based on vendor emission factors provided for these engines. For all emission units except EU ID 12, the SO<sub>2</sub> potential emissions are based on 0.125% by weight diesel fuel sulfur content and 60 ppmv H<sub>2</sub>S in the fuel gas. For EU ID 12, SO<sub>2</sub> emissions are based on combustion of ULSD fuel at 15 ppmw sulfur as required under NSPS Subpart IIII. VOC emissions from storage vessels are estimated using EPA Tanks v4.09 software.

# **COTU (Criteria Pollutants)**

Potential emissions estimates for all criteria pollutants except SO<sub>2</sub> are based on AP-42 emission factors. The SO<sub>2</sub> potential emissions are based on 60 ppmv H<sub>2</sub>S in the fuel gas for heater IDs H1, H2, and H4 and flare ID F2, 162 ppmv H<sub>2</sub>S in the refinery fuel gas for flare ID F1, and 0.125% by weight diesel fuel sulfur content for the IEU. If these fuel sulfur assumptions are exceeded, then the SO<sub>2</sub> PTE could be exceeded depending on hours of operation and actual fuel consumption rate. VOC emissions from storage vessels are estimated using EPA Tanks v4.09 software.

# PBOC/MCC/COTU (HAPs Emissions)

Total HAP emissions for the PBOC/MCC/COTU are estimated at 8.3 tpy, with n-Hexane being the highest emitted individual HAP at 1.0 tpy. Sources of HAP emissions located at PBOC/Tarmac and COTU include equipment leaks (3.77 tpy), tanks (0.043 tpy), truck rack operations (0.02 tpy), and fuel combustion by turbines, heaters, flares, and engines (2.55 tpy total). Sources of HAPs emissions located at MCC include motor vehicle refueling (0.04 tpy), tanks (0.13 tpy), and fuel combustion by heaters and engines (1.7 tpy). These estimates (8.3 tpy aggregate total and 1.0 tpy maximum individual HAP for all operations combined) are below the HAP-major ton-per-year emissions thresholds of 25 tpy total and 10 tpy per individual HAP.

The HAP emissions estimates and methodologies are documented in *Hazardous Air Pollutant Potential to Emit Estimates – Crude Oil Topping Unit Prudhoe Bay Eastern Operating Area*, November 2004, which was included with the September 2008 amended PBOC/MCC operating permit renewal application.

# PBOC/MCC/COTU (Greenhouse Gas Emissions)

Greenhouse gas (GHG) means the air pollutant defined in 40 C.F.R. 86.1818-12(a) as the aggregate group of six greenhouse gases: carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), methane (CH<sub>4</sub>), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The stationary source emits or has the potential to emit only CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub>. CO<sub>2</sub>e or carbon dioxide equivalent emissions are defined as the sum of the mass emissions of each individual GHG adjusted for its global warming potential (GWP). For GHG emissions, PTE for PBOC/MCC is 66,826 TPY CO<sub>2</sub>e. Calculations were submitted by the Permittee in March 2013. PTE for CO<sub>2</sub>e was estimated based on emission factors found in 40 C.F.R. 98, Subpart C, Tables C-1 and C-2.

# BASIS FOR REQUIRING AN OPERATING PERMIT

In accordance with AS 46.14.130(b), an owner or operator of a Title V source<sup>2</sup> must obtain a Title V permit consistent with 40 C.F.R. Part 71, as adopted by reference in 18 AAC 50.040.

<sup>&</sup>lt;sup>2</sup> "Title V source" means a stationary source classified as needing a permit under AS 46.14.130(b) [*ref. 18 AAC* 50.990(111)].

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:

(1) A major source;

(2) A stationary source, including an area source, subject to federal new source performance standards under Section 111 of the Clean Air Act or national emission standards for hazardous air pollutants under Section 112 of the Clean Air Act; and

(3) 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) 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.

This stationary source does not emit or have a PTE equal to or greater than 100,000 TPY of  $CO_2e$ , so it is not a major source of GHG emissions for Title V permitting.

The combined emissions from the Prudhoe Bay Operations Center, the Main Construction Camp, and the Crude Oil Topping Unit have the potential to emit 100 tons per year (TPY) or more of a regulated air pollutant. These three facilities are aggregated to determine the source status under 18 AAC 50.326 (40 C.F.R. 71) because they either share the same gravel pad (PBOC and COTU) or are located on adjacent/nearby pads (MCC compared to PBOC and COTU). Aggregation of these three facilities classifies them as a major stationary source under 40 C.F.R. 71.3(a)(1). The aggregated stationary sources are all under common control and ownership of BPXA thru the GPBU operating agreement and are all classified as SIC: 1311 *Crude Petroleum and Natural Gas.* Insignificant emission units owned and controlled by others may be situated on the same gravel pad without changing the stationary source (PBOC/MCC & COTU) classification.

# AIR QUALITY PERMITS

# **Previous Air Quality Permit to Operate**

The most recent permit issued for this stationary source was permit-to-operate number 8336-AA001. This permit-to-operate included all construction authorizations issued through January 30, 1983, and was issued before January 18, 1997. Permit No. 8336-AA001 expired on January 1, 1988, and was not in effect as of the issuance date of Permit No. AQ0274TVP01. Therefore, the conditions of Permit No. 8336-AA001 were not considered when preparing Permit No. AQ0274TVP01, or in the renewal (AQ0274TVP02).

# Title I (Construction and Minor) Permits

The Department issued minor permit no. AQ0274MSS01 to this stationary source on September 17, 2007. All stationary source-specific requirements established in this Title I permit are included in the renewed Title V operating permit as described in Table E.

# Title V Operating Permit Application, Revisions and Renewal History

The Permittee submitted an initial application on December 4, 1997.

The Permittee amended the initial application on January 20, 1998, April 28, 1998, June 18, 1999, July 12, 1999 and October 26, 2000; the latter two in response to an information request from the Department.

Additional information was received on February 23, 2001. This information was certified and notarized on April 2, 2001.

Permit No. AQ0274TVP01 was issued to the Permittee on October 4, 2002.

BP Exploration (Alaska) Inc. submitted a renewal application on April 30, 2007 which was received on May 7, 2007. Amended applications were submitted September 22, 2008 and April 28, 2009. The Department issued Operating Permit No. AQ0274TVP02 on December 30, 2010. The owner or operator submitted an application to modify this permit in March 2013 and August 2013 to request that the permit include applicable provisions of 40 C.F.R. 63 Subpart CCCCCC and to re-classify EU IDs 7, 9, and 13 as non-emergency engines for purposes of NESHAP Subpart ZZZZ. This application also documented various corrections to permit No. AQ0274TVP02 and provided estimated GHG emissions for the stationary source. BPXA requested revisions to the AQ0274TVP02 conditions below. However, the Department did not revise the conditions due to the following reasons:

- Conditions 2.1a and 2.1b: The first and second Method 9 observations are required within 30 days after the end of a calendar month in which the specified hour threshold is exceeded. BPXA states a 45-day deadline is used in the most recent versions of the Title V renewal permits that ADEC has issued to BPXA. The Department did not revise the conditions to require the Method 9 observations within 45 days after the end of a calendar month in which the specified hour threshold is exceeded, because the Department does not believe the 30-day requirement is overly burdensome. Additionally, BPXA did not explain why a 45-day deadline is more appropriate for this stationary source.
- Conditions 9.1b and 9.2: BPXA requested adding "or" to the end of Condition 9.1b and changing "report" to "for" in Condition 9.2 while changing numbering of Condition 9.2 to Condition 9.1c. The Department did not revise the conditions because these are standard conditions. The Department uses standard permit conditions in operating permits unless the Department determines that emission unit or stationary source specific conditions more adequately meet the requirements of 18 AAC 50.
- Conditions 59.1c and 59.1c(i) through (iii): BPXA requested several revisions to these conditions to clearly separate excess emissions and permit deviation reporting requirements. The Department did not revise these conditions. However, the Department did delete the "Excess Emissions" heading in Condition 59.1 because it is not in the current standard condition. The Department believe this revision will address BPXA's concern on these conditions.

# **COMPLIANCE HISTORY**

The stationary source has operated at its current location since the early 1960's. Review of the stationary source's files indicates general compliance with its operating permit. As a result of compliance evaluations conducted in 2003, 2006 and 2008, the Department has found the activities at PBOC/MCC to generally be operating in compliance with the operating permit.

The following bulleted historical information is carried forward from permit AQ0274TVP01 for continuity:

- January 5, 1988: the previous operator of PBOC/MCC, i.e. AAI, requested to renew their operating permit (i.e. 8336-AA001).
- January 30, 1988: operating permit 8336-AA001, i.e. the previous operating permit for PBOC/MCC, expired.
- February 22, 1988: the Department requested information from AAI regarding PBOC/MCC.
- March 2, 1988: AAI responded to the Department's February 22<sup>nd</sup> information request.
- March 23, 1988: the Department sent a letter to the previous operator of PBOC/MCC, i.e. AAI, stating that "...the PBOC does not need an Air Quality Control Permit to operate. However, please realize that the fired units must still meet the emission standards of 18 AAC 50.050, and the Department may still conduct air quality control inspections."
- September 6, 1995: EPA's John Seitz, Director of the Office of Air Quality Planning and Standards, addressed the subject of "Calculating PTE for Emergency Generators" in a guidance memorandum. According to the memorandum, EPA "believes that 500 hours is an appropriate default assumption for estimating the number of hours that an emergency generator could be expected to operate under worst-case conditions."
- January 18, 1997: 18 AAC 50.210. "Potential To Emit" was promulgated, which defines PTE per AS 46.14.990(21) as being based on 8760 hours of source operation per year unless limited by enforceable limits.
- December 4, 1997: AAI submitted a Title-V operating permit application for PBOC/MCC. On and after this date, PBOC/MCC operated under their Title-V application, which included enforceable owner requested limits (ORL) to keep the PTE below 250 TPY and avoid classification as a PSD Major Facility.
- December 7, 1997: the due date for facilities in Alaska to submit timely and complete Title-V operating-permit applications.
- February 23, 2001/ April 2, 2001: the Permittee faxed a draft letter to the Department stating that, the total actual emissions for each regulated air contaminant at PBOC / MCC did not exceed 250 tons per year between January 30, 1988 (the date that operating permit 8336-AA001 expired) and December 4, 1997 (the date that the Title V permit application was submitted for this stationary source). The information was certified and notarized on April 2, 2001. The Department believes that this conclusion is accurate based on a review of the operating and maintenance records of the facility from 1988 to 1996.

# STATIONARY SOURCE-SPECIFIC REQUIREMENTS CARRIED FORWARD

State of Alaska regulation in 18 AAC 50.326(j) with reference to 40 C.F.R. 71.6(a)(1) requires that an operating permit include all emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance. These requirements include, but are not limited to, each stationary source-specific requirement established in the most recent operating permit or in any other construction permit issued under 18 AAC 50 that is still in effect at the time of permit issuance.

Table E below lists the requirements carried over from Operating Permit No. AQ0274TVP01, and Minor Permit No. AQ0274MSS01 into Operating Permit No. AQ0274TVP02.

Permit No. AQ0274TVP01 <sup>4</sup> and AQ0274MSS01 <sup>5</sup> Condition Number	Description of Requirement	Permit No. AQ0274TVP02 Condition Number	How condition was revised
MS-2 and TV-4	Visible emission standards	1	Similar updated provisions. However, Conditions 2.1 and 2.2 of the MS permit are not carried forward as these are one-time requirements that have been completed.
TV-64, 65, and 66	Visible emissions monitoring, recordkeeping, and reporting	2, 3, and 4	Similar updated provisions.
MS-3 and TV-5	Particulate emissions standards	5	Similar updated provisions.
TV-67, 68, and 69	Particulate emissions monitoring, recordkeeping, and reporting	6, 7, 8, and 9	Similar updated provisions.
MS-4 and TV-6	Sulfur compound emission standards	10	Similar updated provisions.
MS-5, 6, 7, and 8 and TV-19	Owner requested limits	11, 12	Similar updated provisions.
TV-7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 20	Requirements applicable to the PBOC incinerator	N/A	The incinerator (EU ID 14) has been abandoned in place and removed from the permit.

# Table E - Comparison of Previous Operating Permit No. AQ0274TVP01 and Minor Permit AQ0274MSS01 Conditions to Operating Permit No. AQ0274TVP02 Conditions<sup>3</sup>

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

<sup>&</sup>lt;sup>4</sup> Indicated as "TV" for Title V.

<sup>&</sup>lt;sup>5</sup> Indicated as "MS" for Minor Permit.

Permit No. AQ0274TVP01 <sup>4</sup> and AQ0274MSS01 <sup>5</sup> Condition Number	Description of Requirement	Permit No. AQ0274TVP02 Condition Number	How condition was revised
TV-17	NSPS Subpart Kb	N/A	Tanks 15 through 19 are no longer subject to Subpart Kb effective with the 10/15/03 amendment to the subpart and therefore are no longer significant sources.
TV-18	Source Aggregation	N/A	Similar language is now included on the permit cover page.
TV-Section 12	Permit Shield	Section 10	<ul> <li>Tank permit shields updated to account for changes to tank inventory and permit shield bases.</li> <li>Removed all permit shields that applied to the incinerator in the original Title V permit.</li> <li>Added permit shields for NSPS Subparts IIII and KKKK.</li> <li>Added permit shields for NESHAP Subparts YYYY, ZZZZ, DDDDD, JJJJJJ, and CCCCCCC.</li> <li>Added permit shields for 18 AAC 50.055 as they apply to nonroad engines.</li> <li>Added one-time requirements of conditions 2.1 and 2.2 of permit no. AQ0274MSS01.</li> </ul>
N/A	NESHAP Subpart CCCCCC	23-27	Added in the applicable requirements for EU 18

# STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The State and federal regulations for each condition are cited in Operating Permit No. AQ0274TVP02. The Statement of Basis provides the legal and factual basis for each term and condition as set forth in 40 C.F.R. 71.6(a)(1)(i).

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

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

• 18 AAC 50.055(a) applies to the operation of fuel-burning equipment and industrial processes. EU IDs 1 through 13, 20, and 21 are fuel burning equipment.

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

**Factual Basis:** Condition 1 prohibits the Permittee from causing or allowing visible emissions in excess of 18 AAC 50.055(a)(1).

The Permittee must monitor, record-keep and report emissions in accordance with Conditions 2 through 4, of the permit for EU IDs 1 through 13, 20, and 21.

Conditions 2 - 4 (MR&R conditions) detail a stepwise process for monitoring compliance with the State's visible emissions and, indirectly for particulate matter standards from liquid fuel fired sources. Equipment types covered by these conditions are liquid fuel fired internal combustion engines and heaters at PBOC/MCC. Initial monitoring frequency schedules are established along with subsequent reductions or increases in frequency depending on the results of the self-monitoring program. The monitoring frequency in Condition 2 is not modeled after the tiers set out in the Standard Condition IX of 18 AAC 50.346(c) because the oil-fired equipment is emergency equipment which has seldom experienced more than 400 hours of operations per year. The standard condition's tiered monitoring frequency was not developed for intermittently operated emergency equipment.

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

Notification of the Department via recordkeeping and reporting requirements are included in Conditions 3 and 4.

# **Gas-Fired Fuel Burning equipment:**

<u>Monitoring</u> – The monitoring of gas-fired sources 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 PM emissions. However, the Department can request a source test for PM emissions from any smoking equipment.

<u>Reporting</u> – As provided for in Condition 1.1, the Permittee must state in each operating report whether only gaseous fuels were used in the equipment during the reporting period.

# Liquid Fired Fuel Burning Equipment:

<u>Monitoring</u> – The visible emissions must be observed using Method-9 as detailed in Condition 2. Corrective actions such as maintenance procedures and either more frequent or less frequent testing may be required depending on the results of the observations.

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

<u>Reporting</u> - The Permittee is required to report: 1) emissions in excess of the State visible emissions standard and 2) deviations from permit conditions. The Permittee is required to include copies of the results of all visible emission observations with the operating report.

# Conditions 5 - 9, 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 through 13, 20, and 21 are fuel-burning equipment.

These PM standards also apply because they are contained in the federally approved SIP effective September 13, 2007.

**Factual Basis:** Condition 5 prohibits emissions in excess of the State PM (also called grain loading) standard applicable to fuel-burning equipment and industrial processes. The Permittee shall not cause or allow fuel-burning equipment nor industrial processes to violate this standard.

MR&R requirements are listed in Conditions 6 through 9 of the permit.

The Permittee must establish by actual visual observations which can be supplemented by other means, such as a defined Operation and Maintenance Program that the emission unit is in continuous compliance with the State's emission standards for particulate matter.

# Gas Fired:

For gas fired emission units, (EU ID(s) 1 through 5 and 21), MR&R conditions are Standard Condition VIII adopted into regulation pursuant to AS 46.14.010(d). The Department determined that these standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard conditions meet the requirements of 40 C.F.R. 71.6(a)(3).

Although periodic PM monitoring of gas-fired units is waived, the Department has the discretion to request a source test for PM emissions from any fuel burning equipment under 18 AAC 50.220(a) and 345(l).

# Liquid Fuel-Fired:

For liquid fuel-fired units (EU IDs 6 through 13 and 20), the MR&R conditions are Standard Condition IX adopted into regulation pursuant to AS 46.14.010(d). The Department determined that these standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard conditions meet the requirements of 40 C.F.R. 71.6(a)(3).

# **Condition 10, Sulfur Compound Emissions**

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

• EU IDs 1 through 13, 20, and 21 are fuel-burning equipment.

These sulfur compound standards also apply because they are contained in the federally approved SIP effective September 13, 2007.

**Factual Basis:** The condition requires the Permittee to comply with the sulfur compound emission standard applicable to fuel-burning equipment. The Permittee may not cause or allow the affected equipment to violate this standard.

Sulfur dioxide comes from the sulfur in the fuel (e.g. coal, natural gas, fuel oils). Fuel sulfur testing will verify compliance with the SO<sub>2</sub> emission standard.

**Liquid Fuels:** For oil fired fuel burning equipment the MR&R conditions are Standard Conditions XI and XII adopted into regulation pursuant to AS 46.14.010(e). The Department determined that these standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard conditions meet the requirements of 40 C.F.R. 71.6(a)(3).

**Gaseous fuels**: Fuel sulfur testing will verify compliance with  $SO_2$  emission standard. Mercaptans are a concentrated thiol molecule (e.g. ethanethiol) composed of hydrogen and sulfur used to detect the presence of natural gas by its strong odor as in t-butyl-mercaptan. It is the mercaptan that allows the presence of gas to be detected by its odor, so it is used as a leak detectant. However, it raises the sulfur content of the natural gas and should be accounted for in determining compliance with the State sulfur compound emissions standard. The Department has therefore revised the basic MR&R requirements to monitor the total sulfur quantity, instead of H<sub>2</sub>S concentration, in the natural gas fuel burned at PBOC/MCC due to the presence of mercaptans in the gas supply.

Condition 10.3 requires the Permittee to conduct a semiannual analysis for the fuel gas sulfur content using either ASTM D5504 or D6228, or a listed method approved 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 Permittee is required to report as State 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 semiannual sulfur content analysis with the operating report.

# **Conditions 11 - 12 Owner Requested Limits**

**Legal Basis:** The Permittee is required to comply with all effective stationary sourcespecific 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 may 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:** These conditions include owner requested limits with monitoring, recordkeeping, and reporting requirements that are verifiable and that can be determined at least monthly. The operating-hour limit in Condition 11 applies to the emergency generators and firewater pumps (EU IDs 1 through 3, and 6 through 13) and reduces the potential emissions of the stationary source. This limit maintains emissions well below the PSD trigger limit of 250 TPY. However, as these units are designated emergency use, upon attainment of the RICE MACT compliance date listed in Condition 22.2 their allowable use for emergency and non-emergency operation becomes subject to the allowable use provisions stated in Condition 22.2d up to the cap imposed by the ORL.

The operating time limit in Condition 12 is carried forward from the ORL minor permit AQ0274MSS01. The intent of this limit is to avoid minor permitting under 18 AAC 50.502(c) for the emergency generator operating at the PBOC Tarmac Camp living quarters (EU ID 20). However, as this unit is designated emergency use, upon attainment of the RICE MACT compliance date listed in Condition 22.2 the allowable operating hour use for emergency and non-emergency operation becomes subject to the allowable use provisions stated in Condition 22.2d up to the cap imposed by the ORL.

# **Condition 13, 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 insignificant emission units. The Permittee may not cause or allow their equipment to violate these standards. Insignificant emission units are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

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Condition 13.4a requires certification that the units did not exceed State emission standards during the previous year and did not emit any prohibited air pollution.

# **Condition 14, NSPS Subpart A Requirements**

**Legal Basis:** The Permittee must comply with the applicable New Source Performance Standard (NSPS) provisions incorporated by reference effective July 1, 2007, for specific industrial activities, as listed in 18 AAC  $50.040^6$ .

Most affected facilities subject to an NSPS are subject to Subpart A. At this stationary source, EU ID 12 is subject to NSPS Subpart IIII and certain provisions of Subpart A.

Condition 14.1 - Concealment of emissions prohibitions in 40 C.F. R. 60.12 are applicable to EU ID 12.

**Factual Basis:** General provisions of 40 C.F.R. 60, Subpart A apply to owners or operators who are subject to a relevant subpart under Part 60, except when otherwise specified in an applicable subpart or relevant standard. The intent of Subpart A is to eliminate the repetition of requirements applicable to owners or operators affected by NSPS.

# **Conditions 15 - 19, NSPS Subpart IIII Requirements**

**Legal Basis:** 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 ID 12 is subject to Subpart IIII under 40 C.F.R. 60.4200 because the unit is a NFPA firewater pump engine manufactured after July 1, 2006. Applicable requirements of this subpart are incorporated into the permit based on the determination that the stationary source is accessible by the Federal Aid Highway System (FAHS).

**Factual Basis:** These conditions incorporate the Subpart IIII emissions standards applicable to EU ID 12. The Permittee may not cause or allow EU ID 12 to violate these standards. These conditions also provide applicable MR&R within the Subpart. The Permittee is required to operate and maintain the stationary CI ICE according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. The Permittee is required to monitor and record the monthly engine hours of operation and the calendar year to date hours of operation on each affected CI ICE.

# **Conditions 20 - 22, NESHAPS Subpart ZZZZ Requirements**

**Legal Basis:** The stationary source is an area source of HAP emissions accessible by the Federal Aid Highway System (FAHS). EU IDs 6 - 11, 13 and 20 are designated as affected sources under 40 C.F.R. 63.6590(a)(1)(iii). NESHAPS Subpart ZZZZ for RICE applies because these are existing stationary RICE at an area source of HAPS. EU ID 12 is an affected source under 40 C.F.R. 63.6590(a)(2)(iii). NESHAPS Subpart ZZZZ for RICE applies to this engine because it is a new RICE at an area source of HAPS.

**Factual Basis:** Condition 20 requires compliance with the applicable provisions of NESHAP Subpart ZZZZ, Table 8, which addresses the portions of 40 C.F.R. 63 Subpart A that could apply to engines affected by Subpart ZZZZ. Only §63.1, §63.6, and §63.10 of Subpart A apply to existing emergency engines at area sources of HAPS subject to 40 C.F.R. 63, Subpart ZZZZ.

<sup>&</sup>lt;sup>6</sup> EPA has not delegated to the Department the authority to administer the NSPS program as of the issue date of this permit

Because EU ID 12 is a new RICE at an area source of HAPS, this engine must meet the requirements of NESHAPS Subpart ZZZZ by meeting the requirements of 40 C.F.R. 60, Subpart IIII (conditions 15 through 19) as stated in §63.6590(c). EU ID 12 is exempt from all other requirements of 40 C.F.R. Part 63 per §63.6590(c). EU ID 20 was permitted on 9/17/2007 in minor permit number AQ0274MSS01. This is a model year 1990 CI-ICE. Therefore, it is an existing RICE under §63.6590(a)(1)(iii).

The Permittee has designated EU IDs 6, 8, 10,11 and 20 at PBOC/MCC as emergency RICE. However, provisions have been included in the permit which allow the Permittee to change the operating status of generator EU IDs 6, 8, 10,11 or 20 to non-emergency status when the following criteria are met –

- Provide notification to EPA and ADEC as required by Condition 67.1 prior to changing to non-emergency operating status for any engine. The notification must specifically state the requirements of 40 C.F.R. Subparts A and ZZZZ that will apply or will no longer apply as a result of the change in operation;
- The Permittee must certify in the notification that the engine(s) meet or will meet the new applicable emission, operation, and fuel sulfur limits of Subpart ZZZZ prior to making the intended change in operational status; and
- The information required by 40 C.F.R 63.9(b)(2)(i) (v) must be included with the notification.

Operation as a non-emergency engine may begin upon submittal of the required notification.

An initial performance test and the associated required test notifications and reports must be completed according to the deadlines and requirements of 40 C.F.R. 63.6595(a)(7), 63.6612, 63.7(b) - (c), 63.9(h)(2), and 63.10(d)(2) after making a change to non-emergency status.

The Permittee may not revert to emergency operational status for any engine with the intent of relaxing the emission, operation, and fuel sulfur limits without first applying for a significant Title V permit amendment under 40 C.F.R. 71.7(e)(3). Operation as emergency engines cannot occur in this case until the amended Title V permit is issued.

The Permittee has designated EU IDs 7, 9 and 13 at PBOC/MCC as non-emergency RICE for the purposes of Subpart ZZZZ. The ratings of these engines do not exceed 300 hp and these engines are not subject to any numerical emission limits under Subpart ZZZZ. These engines are treated much the same as an emergency engine without the operating time limits under Subpart ZZZZ or the requirement to monitor operating time under Subpart ZZZZ. Monitoring operating hours is still required to show compliance with the 500 hour limit in Condition 11.

# Conditions 23 - 27, NESHAP Subpart CCCCCC

**Legal Basis:** NESHAP Subpart CCCCCC applies to each gas distribution facility located at an area source for HAPS. Prudhoe Bay Operations Center/ Main Construction Camp is an area source that operates a gas distribution facility with three 29, 820 gallon gasoline storage tanks.

**Factual Basis:** NESHAP Subpart CCCCCC was published in the federal register, 73 FR1945, on January 10, 2008. Under NESHAP Subpart CCCCCC, existing sources are required to comply with the standards in the subpart no later than January 10, 2011. The gasoline storage tank at Prudhoe Bay Operations Center/ Main Construction Camp, EU ID 18 is an existing sources installed in 1993.

An initial notification of applicability, of a monthly throughput of more than 100,000 gallons, was submitted and received by the Department on October 2, 2013 under 40 C.F.R. 63.11124(b)(1). The Notification of Compliance required under 40 C.F.R. 63.11124(b)(2) shall be submitted within 60 days following the installation and testing of the vapor balance system. The Permittee shall be in compliance with all applicable requirements of a gasoline dispensing facility with a monthly throughput of more than 100,000 gallons by October 2, 2016 under 40 C.F.R. 63.1113(c).

NESHAPS Subpart CCCCCC can be implemented and enforced by the US EPA or a delegated authority such as the applicable State, local or tribal agency – in this case the State of Alaska. However, the authorities to approve alternatives to the requirements in 40 C.F.R. 63.11116 through 63.11118 and 63.11120; major alternatives to test methods under 40 C.F.R. 63.7(e)(2)(ii) and (f), as defined in 40 C.F.R. 63.90 and as required in this subpart; and major alternatives to recordkeeping and reporting under 40 C.F.R. 63.10(f), as defined in 40 C.F.R. 63.90, and as required in this subpart, are retained by the Administrator of U.S. EPA and cannot be delegated.

# Conditions 28 - 30, 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.

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

# **Condition 31, 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 32 - 33, 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 Condition I under 18 AAC 50.346(b) adopted pursuant to AS 46.14.010(d). 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 assessable emissions are potential or projected emissions of each air pollutant equal or greater to 10 tons per year authorized by the permit (AS 46.14.250(h)(1)).

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 emissions 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 33.2 such that it referenced "submitted" (i.e., postmarked) rather than "received" in accordance with the timeframe of Condition 33.1.

# **Condition 34, 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.

- EU IDs 1 through 11, 13, 20, and 21 are initially subject to this condition.
- EU ID 12 is not subject to this condition because it is subject to the Federal equivalent condition under Subpart IIII, Conditions 15.1 and 18.4.
- EU IDs 6 through 11, 13 and 20 are no longer subject to this condition on and after the applicable compliance date of the RICE MACT standard of May 3, 2013.

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

The Department adopted this condition under 18 AAC 50.346(b) as Standard Operating Permit Condition VI pursuant to AS 46.14.010(d). The Department added the text "*EU ID*(*s*) 6 *through 11, 13 and 20 are subject to this condition only until the applicable compliance date of May 3, 2013*" because on that date, EU ID(s) 6 through 11, 13 and 20 subject to NESHAPs Subpart ZZZZ will no longer be subject to this condition (as units subject to federal emission standards) and will instead be required to comply with Condition 22.2b. Records kept in accordance with Condition 34.b for units previously subject to GAPCP need to be maintained for 5 years in accordance with Condition 55 even if a unit is no longer subject to this condition. The Department determined that this standard condition as modified 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 35, 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 36, 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 may engage in bulk material handling, transporting, or storing; or will engage in industrial activity at the stationary source.

**Factual Basis:** The condition requires the Permittee to comply with 18 AAC 50.045(d), and take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air. Since the stationary source is not a significant source of fugitive PM emissions, there is no need for additional monitoring or recordkeeping beyond annual certification.

# **Condition 37, 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 a stack or 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 source or stack would need to be modified to accommodate stack injection.

# Condition 38, 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 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.

ADEC adopted this standard condition into 18 AAC 50.346(a) pursuant to AS 46.14.010(d). The Department determined that this condition adequately meets the requirements of 40 C.F.R. 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard condition meets the requirements of 40 C.F.R. 71.6(a)(3).

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 submit copies of these records upon request of the Department.

# Condition 39, 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 59. Excess emission reporting under Condition 59 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 59.

# **Condition 40, Asbestos NESHAP**

**Legal Basis:** The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. This condition ensures compliance with the applicable requirement in 18 AAC 50.040(b)(1) and (2)(F). The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

**Factual Basis:** Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

# **Condition 41, Refrigerant Recycling and Disposal**

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

**Factual Basis:** Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with this federal regulation.

# **Condition 42, NESHAPS Applicability Determinations**

**Legal Basis:** The Permittee has the responsibility to determine if specific federal regulations apply to its stationary sources.

**Factual Basis:** The Permittee has conducted an analysis of the stationary source and determined that it is not a major HAPs stationary source based on emissions.

# **Conditions 43 - 44, Halon Prohibitions**

**Legal Basis:** These prohibitions apply to all stationary sources that use halon for fire extinguishing and explosion inerting. The condition prohibits the Permittee from causing or allowing violations of these prohibitions. The Prudhoe Bay Operations Center / Main Construction Camp (PBOC/MCC) uses halon and is therefore, subject to the federal regulations contained in 40 C.F.R. 82.

Factual Basis: These conditions incorporate applicable 40 C.F.R. 82 requirements.

# **Condition 45, 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.

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. Additional monitoring is achieved through Condition 38, which requires a record of complaints.

The Permittee may conduct open burning by first applying for a separate open burn permit as set forth in Department Guidelines athttp://www.dec.state.ak.us/air/ap/permit.htm.

# **Condition 46, 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 47 - 49, Operating Conditions, Reference Test Methods, Excess Air Requirements**

**Legal Basis:** This condition ensures compliance with the applicable requirement in 18 AAC 50.220(b) and applies 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 47 through 49.

**Factual Basis:** These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with Conditions 47 through 49 consist of the test reports required by Condition 54.

# **Condition 50, Test Exemption**

**Legal Basis:** This condition ensures compliance with the applicable requirement in 18 AAC 50.345(a) and applies when the source exhaust is observed for visible emissions.

**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 51 - 54, Test Deadline Extension, Test Plans, Notifications and Reports**

**Legal Basis:** This condition ensures compliance with the applicable requirement in 18 AAC 50.345(1)-(0) and applies because the Permittee is required to conduct source tests 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 these conditions.

# **Condition 55, 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 56, 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 operating report, even though it must still be **submitted** more frequently than the operating report. This condition supplements the reporting requirements of this permit.

#### **Condition 57, 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. 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 58, 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 59, 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).

Section 13, Notification Form

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

# **Condition 60, Operating Reports**

**Legal Basis:** This condition ensures compliance with the applicable requirement in 18 AAC 50.346(b)(6) and applies to all permits.

**Factual Basis:** The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit. The reports themselves provide monitoring for compliance with this condition.

The Department used the Standard Permit Condition VII as adopted into regulation on August 20, 2008 pursuant to AS 46.14.010(e). The Department has made a correction to the Standard Permit Condition VII by changing the number of copies of documents to be submitted from "an original and two copies" to "an original and one copy". The Department also revised the condition to require quarterly operating reports as requested by the Permittee instead of the standard semi-annual operating reports and a change on the due date for submittal from 30 days to 45 days following the last day of the reporting period. The Department has determined that the condition in this permit adequately meets the requirements of 40 C.F.R. 71.6(a)(3).

# **Condition 61, 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 provide monitoring records for compliance with this condition.

Condition 61.2 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 and the effective permit at that time, or may chose to provide two reports – one certifying compliance with permit terms and conditions from January 1 until the date of expiration of the old permit, and a second report certifying compliance with terms and conditions in effect from the effective date of the renewal permit until December 31.

The Permittee is required to submit to the Department an original and one copy of an annual compliance certification report. The Permittee may submit one of the required copies electronically at their discretion. This change more adequately meets the requirements of 18 AAC 50 and agency needs, as the Department can more efficiently distribute the electronic copy to staff in other locations.

# **Condition 62, NSPS and NESHAP Reports**

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

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

# **Condition 63, Emission Inventory Reporting**

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

**Factual Basis:** The Department has incorporated Standard Permit Conditions XV and XVI as adopted by regulation on September 27, 2010. The Department adopted these conditions under 18 AAC 50.346(b) pursuant to AS 46.14.010(e). 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).

The air emissions reporting requirements under 40 C.F.R. 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.

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.

# **Condition 64, Permit Applications and Submittals**

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

**Factual Basis:** This condition 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 as allowed under 40 C.F.R. 71.10(d)(1).

# **Conditions 65 - 67, Permit changes and revisions requirements**

**Legal Basis:** The Permittee is obligated to notify the Department and EPA of certain off-permit source changes and operational changes under18 AAC 50.326(j)(4). 40 C.F.R. 71.6(a)(8), (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); therefore, language addressing these provisions has not been included in this permit as part of Condition 65.

# **Condition 68, 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 under18 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 Prudhoe Bay Operations Center / Main Construction Camp (PBOC/MCC) 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 <u>timely</u> 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 <u>complete</u> 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 69 - 72, General Compliance Requirements and Schedule

**Legal Basis:** These conditions ensure compliance with the applicable requirement in 18 AAC 50.326(j)(3) and 40 C.F.R. 71.6(c). 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 general compliance conditions are required for all operating permits.

# **Conditions 74 - 75, 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 C of Operating Permit No. AQ0274TVP02 shows the permit shield that the Department granted to the Permittee. Should any of the shielded requirements become applicable during the permit term, the Permittee is required to take necessary steps to comply with all applicable requirements in a timely manner.

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, Title I permits and inspection reports.

Shield Requested for:	Reason for Shield Request:	Reason for Denial
Existing Engines at an Area Source: 40 C.F.R. 63.6605(a), Subpart ZZZZ – General Compliance Requirements	Existing emergency engines and non- emergency engines with a site rating of ≤300 bhp, are not subject to any emissions limitations or operating limitations under Subpart ZZZZ.	40 C.F.R. 63.6605(a) also requires compliance with "other requirements" in NESHAP Subpart ZZZZ, which would include the maintenance requirements for these engines.
Existing Engines at an Area Source: 40 C.F.R. 63.6640(a)	Compliance status reporting requirements only apply to CI RICE subject to numerical emissions or operational limits. There are no emissions or operational limits that apply to these engines	Table 2d and Table 6 contain applicable requirements for these engines.

# **Table F – Permit Shields Denied**