Alaska Department of Environmental Conservation
Air Permits Program

[EPA Proposed - January 05, 2026]
Alyeska Pipeline Service Company
Pump Station 4 (PS-4)

STATEMENT OF BASIS
for the terms and conditions of
Permit No. AQ0075TVP05

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INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. AQ0075TVP05.

STATIONARY SOURCE IDENTIFICATION

Section 1 of Operating Permit No. AQ0075TVP05 contains information on the stationary source as provided in the Title V permit application.

The Pump Station 4 (PS-4) is jointly owned by Harvest Alaska, LLC, ConocoPhillips Transportation Alaska, Inc., and ExxonMobil Pipeline Company. PS-4 is operated by Alyeska Pipeline Service Company (APSC) and APSC is the Permittee for the stationary source's operating permit. The SIC code for this stationary source is 4612 – Crude Petroleum Pipelines.

The stationary source is a crude oil pumping facility. PS-4 is the third active pump station of the Trans Alaska Pipeline System (TAPS), which transports crude oil by pipeline from the North Slope, Alaska, to the Valdez Marine Terminal, Alaska. PS-4 is accessible by the Dalton Highway, which is part of the Federal Aid Highway System (FAHS).

EMISSIONS UNIT INVENTORY AND DESCRIPTION

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

The emissions units at the PS-4 that have specific monitoring, recordkeeping, and reporting requirements are listed in Table 1 of Operating Permit No. AQ0075TVP05.

Table 1 of Operating Permit No. AQ0075TVP05 contains information on the emissions units regulated by this permit as provided in the application. The table is provided for informational and identification purposes only. Specifically, the emissions unit rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

A summary of the potential to emit (PTE)[1] and assessable PTE as indicated in the application from the PS-4 is shown in the table below.

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

Emissions	NO_X	CO	PM_{10}	SO_2	VOC	CO_2e[1]	HAPs[2]	Total[3]
PTE	178.27	1,060.88	10.39	20.86	40.79	155,619	2.57	1311.19
Assessable PTE	178.27	1,060.88	10.39	20.86	40.79	0	0	1311.19

[1] *Potential to Emit* or *PTE* means the maximum capacity of a stationary source to emit a pollutant under its physical or operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source, as defined in AS 46.14.990(22).

Notes:

1. CO_2e emissions are defined as the sum of the mass emissions of each individual GHG adjusted for its global warming potential.
2. HAP emissions are a subset of either VOC emissions or PM_{10} emissions and are excluded from the assessable emissions total to avoid double counting.
3. Total PTE and total assessable PTE shown in the table do not include CO_2e and HAPs.

The assessable PTE listed under Condition 67.1 is the sum of the PTE of each individual air pollutant, other than greenhouse gases (GHGs). The emissions listed in Table A are estimates that are for informational use only. The listing of the emissions does not create an enforceable limit for the stationary source.

For criteria pollutants and GHGs, emissions are as provided in the application, as follows: For fuel-burning equipment, the Permittee applied manufacturer-provided emission factors or AP-42 emission factors as applicable to the allowable operating limits to obtain emissions. For SO_2 emissions from fuel combustion, the Permittee used mass balance to estimate the emissions. For VOC and HAP emissions from the crude oil tank, the Permittee used mass balance and procedures specified in Section 11 of this permit to estimate the emissions. For greenhouse gas emissions, the Permittee applied emission factors from 40 C.F.R. 98 to the fuel combustion to estimate the emissions.

BASIS FOR REQUIRING AN OPERATING PERMIT

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

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

- A major source;
- A stationary source, including an area source, subject to federal New Source Performance Standards (NSPS) under Section 111 of the Clean Air Act or National Emission Standards for Hazardous Air Pollutants (NESHAP) under Section 112 of the Clean Air Act;
- Another stationary source designated by the Federal Administrator by regulation.

The Permittee is required to obtain an operating permit for PS-4 as specified under 18 AAC 50.326(a) and 40 C.F.R. 71.3(a), because the stationary source is a major source. This stationary source is a major source because, as defined in Section 302 of the Clean Air Act, it directly emits, or has the potential to emit 100 TPY or more of any air pollutant subject to regulation.

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

AIR QUALITY PERMITS

Permits to Operate

The last permit-to-operate issued for this stationary source is Permit to Operate No. 9572-AA009 issued on March 4, 1996. This permit was amended through Construction Permit No. 9872-AC024 issued on December 4, 1998.

Title I (Construction and Minor) Permits

Construction Permit No. 9872-AC024 was issued to the Permittee on December 4, 1998 (in the form of Permit to Operate No. 9572-AA009 Amendment No. 2). All stationary source-specific requirements established in this permit are included in this Title V operating permit, Permit No. AQ0075TVP05, as described in Table B.

Construction Permit No. 075CP01 was issued on March 11, 2003, to revise allowable fuel gas H_2S content from 17 ppmv H_2S (in Permit No. 9872-AC024) to 36 ppmv H_2S. This revision was not carried forward because the allowable fuel gas H_2S content was raised to 150 ppmv in Construction Permit No. AQ0075CPT02. All stationary source-specific requirements established in this permit are included in this Title V operating permit, Permit No. AQ0075TVP05, as described in Table C.

Construction Permit No. AQ0075CPT02 was issued on February 14, 2005, to allow authorization for the decommissioning of existing EU IDs 1 – 9 and installation of EU IDs 12 – 17 as part of the APSC's strategic reconfiguration (SR) at PS-4. This permit was revised under Minor Permit Nos. AQ0075MSS01 and AQ0075MSS02, as explained below. All stationary source-specific requirements established in this permit are included in this Title V operating permit, Permit No. AQ0075TVP05, as described in Table D.

Construction Permit No. AQ0075CPT03 was issued to the Permittee on October 28, 2005. This permit implemented owner-requested limits (ORLs) to cap the crude oil breakout tank's (EU ID 21) emissions, thereby ensuring that PS-4 is a HAP minor source. All stationary source-specific requirements established in this permit are included in this Title V operating permit, Permit No. AQ0075TVP05, as described in Table E.

Minor Permit No. AQ0075MSS01 was issued on June 22, 2006, to revise the terms and conditions of Permit No. AQ0075CPT02 for strategic reconfiguration. Specifically, the Permittee decided not to install the boilers, EU IDs 16 and 17, and instead added EU IDs 18 (11 insignificant miscellaneous gas-fired shop heaters). This permit was rescinded and replaced by Minor Permit No. AQ0075MSS02.

Minor Permit No. AQ0075MSS02 was issued on March 26, 2008, to revise the terms and conditions of Construction Permit No. AQ0075CPT02 and to rescind Minor Permit No. AQ0075MSS01. Specifically, the Permittee decided to add two reciprocating internal combustion engines, EU IDs 19 and 20, to the stationary source. All stationary source-specific requirements established in this permit are included in this Title V operating permit, Permit No. AQ0075TVP05, as described in Table F.

Minor Permit No. AQ0075MSS03 was issued on September 30, 2010, allowing the installation of a new 800 kW diesel black start generator (EU ID 22) at PS-4. All stationary source-specific requirements established in this permit are included in this Title V operating permit, Permit No. AQ0075TVP05, as described in Table G.

Title V Operating Permits

Permit No. AQ0075TVP01. The Permittee submitted an application for an initial Title V operating permit on October 1, 1997, and supplements to the application on December 5, 1997, January 26, 1998, and March 6, 2000. On October 1, 2003, the Department issued the initial Operating Permit No. AQ0075TVP01.

Permit No. AQ0075TVP02. The Permittee submitted an application to renew the initial operating permit on April 24, 2008, with supplements to the application dated July 10, 2008. The Department determined the application was complete on August 14, 2008. The Permittee submitted an amendment to the Title V operating permit renewal application on August 13, 2008, October 30, 2008, and April 1, 2009. In the first amendment, the Permittee requested permit hygiene and the removal of the turbine relocation monitoring, recordkeeping, and reporting terms contained in PS-1, 2, 4, 5, 7, and 12 operating permits. For PS-4, the "turbine relocation" condition in the initial Title V permit is deemed no longer necessary and has been removed in this renewal permit. The purpose of the second amendment was to withdraw the Permittee's previous applicability determination on 40 C.F.R. 63 Subpart CCCCCC to the stationary source and to request a permit shield from the requirements of the subpart. The Department concurred with the Permittee's assessment and, therefore, granted the permit shield request in the renewal permit. Upon the Department's request, the Permittee provided relevant additional information via email on February 6 and 25, 2009. On April 1, 2009, APSC provided a second application amendment to withdraw the Permittee's previous applicability determination on 40 C.F.R. 63 Subpart HHHHHH to the stationary source and to request a permit shield from the requirements of the subpart. The Department concurred with the Permittee's assessment regarding the inapplicability of 40 C.F.R. 63 Subpart HHHHHH and has added a shield.

On July 24, 2009, the Department received an email and attached a notification letter from the Permittee to EPA regarding the permanent shutdown of the solid waste incinerators at PS-1, 3, and 4. The Permittee also requested deletion of EU ID 11 and all associated monitoring, recordkeeping, and reporting requirements. The Department granted the request in the renewal permit. The Department public noticed Operating Permit AQ0075TVP02 on May 27, 2010, and issued the final permit on February 17, 2011.

Permit No. AQ0075TVP03. The Permittee submitted a permit renewal application on July 2, 2015. The renewal application did not request any changes to the operating permit. The Department public noticed Operating Permit AQ0075TVP03 on January 21, 2016, and issued the final permit on June 9, 2016.

Permit No. AQ0075TVP04. The Permittee submitted a permit renewal application on November 19, 2020. The renewal application did not request any changes to the operating permit. The Department included the new Standard Permit Conditions in the permit renewal that were revised on July 22, 2020. The Department public noticed Operating Permit AQ0075TVP04 on September 14, 2021, and issued the final permit on January 20, 2022.

Permit No. AQ0075TVP05. The Permittee submitted an application to renew Operating Permit No. AQ0075TVP04 on July 29, 2025. The Department issued Operating Permit No. AQ0075TVP05 on DATE.

COMPLIANCE HISTORY

The stationary source has operated at its current location since 1977. PS-4 is classified as a Prevention of Significant Deterioration (PSD) major because it emits or has the potential to emit 250 TPY or more of a regulated air pollutant. Although the stationary source as a whole is designated as a major source under PSD, a PSD permit has not been required because the source commenced construction prior to August 7, 1977 (the effective date of the PSD regulations) and has not been modified to a level above PSD emission thresholds since. Review of the permit files, which include the past inspection reports, indicates the following compliance history.

In 1990, the Permittee and the Department entered into a Compliance Order by Consent (COBC) No. 90-245-2621 to resolve allegations regarding unauthorized modifications to the TAPS pump stations, including the addition of rim cooling on the mainline turbines. The COBC prohibited the installation of turbine rim cooling without pre-construction review and capped fuel sulfur contents. This COBC is closed.

The Department conducted a full compliance evaluation (FCE), which included an on-site inspection on December 11, 2006, covering the period January 1, 2005, through December 31, 2006. The Department issued an Air Quality Full Compliance Evaluation Report for the PS - 4, File No. 330.16.007, Enforcement Tracking No. 07-0080-37-6141, dated February 15, 2007. This evaluation concluded that the stationary source was out of compliance with some conditions of Permit No. AQ0075TVP01 due to procedural violations on reporting requirements in 2005, and by operating at sewage stack air injection pressures outside permitted limits in 2006. These compliance issues have been addressed and resolved.

An offsite FCEs covering the period 1/1/2007 – 6/30/2008 and an onsite FCE covering the period 7/1/2008 – 11/30/2010 found the stationary source to be in non-compliance for various procedural violations, including not reporting hours of operation that dual-fuel EUs operated on backup liquid fuel, not reporting a rolling 12-month fuel consumption for a one month period, missed Method 9 observations, a late reporting of intent to remove asbestos, and failing to identify a permit deviation on a facility operating report. On-site FCEs covering the periods 12/1/2010 – 6/30/2012 and 7/1/2012 – 4/30/2014 found the stationary source to be operating in compliance.

An onsite FCE for the period 3/16/2016 – 11/30/2017 found the source to be operating in compliance. The previous offsite FCE covering the period 5/1/2014 – 2/15/2016 and the onsite FCE covering the period 12/1/2017 – 9/25/2019 found the stationary source to be in non-compliance for procedural violations. During this inspection period, APSC was not analyzing Total Base Number in their CI RICE EUs as required by NESHAP Subpart ZZZZ, as an alternative to changing the oil and filter, and failed to provide one oil analysis for EU 15. APSC corrected their oil analysis program to include TBN monitoring. An onsite FCE covering the period 9/26/2019 – 5/31/2021 found the source to be in non-compliance for a procedural violation. ASPC submitted a permit deviation for two instances when turbines EU IDs 12 and 13 failed to record temperature and load data during routine maintenance, which involved upgrading the processors for the PLCs. Monitoring and recording of the data resumed after the upgrade was completed.

Except as described above, a review of the permit files for this stationary source, which includes the past inspection reports and compliance evaluations, indicates that the stationary source is generally operating in compliance with its operating permit.

APPLICABLE REQUIREMENTS FROM PRECONSTRUCTION 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 preconstruction permit issued under rules approved in Alaska's State Implementation Plan (SIP).

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

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

Preconstruction permit terms and conditions include both source-specific conditions and conditions derived from regulatory applicable requirements, such as standard conditions, generally applicable conditions, and conditions that quote or paraphrase requirements in regulation. These requirements include, but are not limited to, each emissions unit- or source-specific requirement established in these permits issued under 18 AAC 50 that are still in effect at the time of issuance of Operating Permit No. AQ0075TVP05.

Table B through Table G below list the requirements carried over from Construction Permit Nos. 9872-AC024, 075CP01, AQ0075CPT02 and AQ0075CPT03, Minor Permit Nos. AQ0075MSS02, and AQ0075MSS03 into the Operating Permit No. AQ0075TVP05 to ensure compliance with the applicable requirements.

Table B – Comparison of Construction Permit No. 9872-AC024 to Permit No. AQ0075TVP05 Conditions[1]

9872-AC024 Condition No.	Description of Requirement	AQ0075TVP05 Condition No.	How Condition was Revised
Condition 10 and Exhibit B	Liquid fuel limits: Eclipse Heaters (EU IDs 8 & 9)	Condition 21.1	Same limits, except changed "per year" to "for any consecutive 12-month period."

Table C – Comparison of Construction Permit No. 075CP01 Conditions to Operating Permit No. AQ0075TVP05 Conditions[1]

075CP01 Condition No.	Description of Requirement	AQ0075TVP05 Condition No.	How Condition was Revised
Conditions 2.3, 2.6, and 2.7	Fuel gas sulfur MR&R	Conditions 24.1.a through 24.1.d	Updated sulfur content testing methods. Removed portable H_2S analyzer (no longer used as an alternative testing method).

Table D – Comparison of Permit No. AQ0075CPT02 Conditions to Operating Permit No. AQ0075TVP05 Conditions[1]

AQ0075CPT02 Condition No.	Description of Requirement	AQ0075TVP05 Condition No.	How Condition was Revised
Conditions 2.2 through 2.4	ORLs for Ambient Air Quality Protection – NOx, SO_2	Conditions 25.2 through 25.4	No revision.
Condition 3, 3.1, and 3.2	Fuel Sulfur Limits	Conditions 24, 24.1, and 24.2	Same limits. Added MR&R condition.
Condition 4	Stack Parameters, EU ID 12	Condition 26	Deleted "install" requirement. EU ID 12 stack exhaust is already installed.
Condition 5	ORLs to Avoid PSD Major Modification – CO (for EU IDs 12 & 13)	Condition 27	Did not carry forward Condition 5.3, where the Permittee is allowed to "use other method approved by the Department". This text 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, and 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.
Table 3	CO Emission Rates for EU IDs 12 and 13 based on Vendor Data	Table 3	No revision.
Condition 8	ORLs to Avoid PSD Major Modification – NOx (EU IDs 12, 14, & 15)	Condition 28.1	Same limits. Added MR&R condition.
Condition 9	ORLs to Avoid PSD Major Modification – SO_2 (EU IDs 12, 14, & 15)	Condition 29	Same limits. Added MR&R condition.

Table E – Comparison of Permit No. AQ0075CPT03 Conditions to Operating Permit No. AQ0075TVP05 Conditions[1]

AQ0075CPT03 Condition No.	Description of Requirement	AQ0075TVP05 Condition No.	How Condition was Revised
Condition 1	Hazardous Air Pollutant ORLs (Tank 140, EU ID 21)	Condition 22	Not revised.
Condition 2	Hazardous Air Pollutant ORLs Monitoring and Recordkeeping (Tank 140, EU ID 21)	Condition 22.1	Did not carry forward Conditions 2.2, 2.3, 2.5b, and 2.6a, where the Permittee is allowed to "use equivalent methods approved by the Department". This text 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 and is not to be used in subsequent permits since it allows a Permittee to bypass the public

AQ0075CPT03 Condition No.	Description of Requirement	AQ0075TVP05 Condition No.	How Condition was Revised
			process for changing monitoring requirements by submitting off-record requests to change monitoring methods.
Condition 3	Hazardous Air Pollutant ORLs Reporting (Tank 140, EU ID 21)	Condition 22.2	Not revised.

Table F – Comparison of Permit No. AQ0075MSS02 Conditions to Operating Permit No. AQ0075TVP05 Conditions[1]

AQ0075MSS02 Condition No.	Description of Requirement	AQ0075TVP05 Condition No.	How Condition was Revised
Table 1 and Condition 1	Emission Unit Inventory	Condition 23	Added the emission units authorized in Permit No. AQ0075MSS02, except for EU ID 18 (11 insignificant miscellaneous shop heaters)
Conditions 3 and 5 through 7	Authorization to Install EU ID 18 for the Strategic Reconfiguration	Conditions 23.1 through 23.4	Requirements related to EU IDs 12–15 have been removed as they have been fulfilled.
Condition 8 and Table 2	ORLs for Ambient Air Quality Protection – NOx, SO_2 (EU IDs 12 – 15, 19 & 20)	Conditions 25 and 25.1, and Table 2	No revision.

Table G – Comparison of Permit No. AQ0075MSS03 Conditions to Operating Permit No. AQ0075TVP05 Conditions[1]

AQ0075MSS03 Condition No.	Description of Requirement	AQ0075TVP05 Condition No.	How Condition was Revised
Conditions 3 and 4	ORL to Avoid PSD Major Modification – NOx (EU ID 22)	Condition 28.2	No revision.

NON-APPLICABLE REQUIREMENTS

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

- **NSPS Subpart KKKK:** Although the Permittee has two turbines (EU IDs 12 and 13), the provisions of this Subpart are not currently applicable since the turbines have not been modified or reconstructed since the Subpart applicability date. A permit shield has not been granted for this regulation (or parts of this regulation).
- **40 C.F.R. 64, Compliance Assurance Monitoring:** None of the emissions units at the stationary source use a control device to achieve compliance with emission limits or standards. Therefore, CAM requirements are not applicable.

STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The Department adopted regulations from 40 C.F.R. 71, as specified in 18 AAC 50.040(j), to establish operating permit regulations. The EPA fully approved the Alaska Operating Permit Program on November 30, 2001, as noted in Appendix A to 40 C.F.R. 70. This Statement of Basis, required under 40 C.F.R. 71.11(b), provides the legal and factual basis for each condition of Operating Permit No. AQ0075TVP05. Additionally, and as required by 40 C.F.R. 71.6(a)(1)(i), the state and federal regulations for each permit condition are cited in the permit.

Conditions 1, 2 through 4, and 12, Visible Emissions Standard and MR&R

Legal Basis: These conditions require compliance with the visible emissions standards in 18 AAC 50.055(a).

- 18 AAC 50.055(a) applies to the operation of fuel-burning equipment and industrial processes. EU IDs 8, 9, 12 through 15, 18, and 22 are fuel-burning equipment.

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

Factual Basis: Condition 1 prohibits the Permittee from causing or allowing visible emissions in excess of the applicable standard in 18 AAC 50.055(a)(1). MR&R requirements are listed in Conditions 2 through 4 (for liquid fuel-burning equipment) and Condition 12 (for dual fuel-burning equipment) of the permit. These conditions have been adopted into regulation as Standard Permit Condition (SPC) IX – Visible Emissions and PM Monitoring Plan for Liquid Fuel-Burning Equipment and Flares. The only change the Department made to SPC IX is the removal of the optional smoke/no smoke plan, as APSC has chosen to use Method 9 readings to demonstrate compliance with visible emissions.

The Department has determined that the standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No additional emissions unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source-specific conditions would better meet the requirements. Therefore, the Department concludes that the standard conditions meet the requirements of 40 C.F.R. 71.6(a)(3).

Except for gas fuel-burning equipment, the Permittee must establish by visual observations of emissions unit exhaust, which may be supplemented by other means, such as a defined Stationary Source Operation and Maintenance Program, that the stationary source is in continuous compliance with the state's emission standards for visible emissions.

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

Reasonable action thresholds are established in these conditions that require the Permittee to progressively address potential visible emission problems from emissions units either

through maintenance programs and/or more rigorous tests that will quantify whether a specific emission standard has been exceeded.

Gas Fuel-Burning Equipment:

Monitoring – The monitoring of gas-fired emissions units for visible emissions is waived; i.e., no Method 9 or Smoke/No Smoke observations 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 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- Burning Equipment:

Monitoring – The emissions units must be observed by Method 9 as detailed in Condition 2. Corrective actions such as maintenance procedures or more frequent observations may be required depending on the results of the observations.

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

Reporting - The Permittee is required to report emissions in excess of the state visible emissions standard and deviations from permit conditions. The Permittee is also required to include in the operating report copies of the results of all visible emission observations.

Dual Fuel-Burning Equipment:

As long as dual fuel-burning emissions units operate only on gas, monitoring consists of a statement in each operating report indicating only gaseous fuels were used in the equipment during the reporting period. When any of the EU IDs 8, 9, or 12 operates on a backup liquid fuel for more than 400 hours in a calendar year, monitoring as detailed in Condition 12 is required for that emissions unit in accordance with Department Policy and Procedure No. 04.02.103, Topic # 2. When any of the EU IDs 8, 9, or 12 operates on a backup liquid fuel for 400 hours or less in a calendar year, monitoring for that emissions unit consists of an annual certification of compliance with the opacity standard. The 400-hour trigger for additional monitoring applies to each individual unit and not as a combined total for all units.

Significant Emissions Units under 18 AAC 50.326(d)(1):

For EU IDs 14, 15, and 22, no visible emissions monitoring is required when these emissions units are insignificant based on actual (EU ID 14, emergency generator) or potential emissions due to Table 2 (EU ID 15) and Condition 28.2 (EU ID 22) that limit either their hours of operation or fuel consumption. As long as the emissions units operate within these limits, they are insignificant by emissions rate as specified in 18 AAC 50.326(e), and no monitoring is required in accordance with Department Policy and Procedure No. 04.02.103, Topic # 3. The Permittee must annually certify compliance under Condition 92 with the visible emissions standard based on reasonable inquiry.

Conditions 5 and 6 through 12, PM Standard and MR&R

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

- 18 AAC 50.055(b)(1) applies to the operation of fuel-burning equipment and industrial processes. EU IDs 8, 9, 12 through 15, 18, and 22 are fuel-burning equipment.

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

Factual Basis: Condition 5 prohibits emissions in excess of the applicable state PM standard. MR&R requirements are listed in Conditions 6 through 12 of the permit. These conditions have been adopted into regulation as SPC IX.

The Department has determined that the standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No additional emissions unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source-specific conditions would better meet the requirements. Therefore, the Department concludes that the standard conditions meet the requirements of 40 C.F.R. 71.6(a)(3).

Except for gas fuel-burning equipment, the Permittee must establish by visual observations, which may be supplemented by other means, such as a defined Stationary Source Operation and Maintenance Program, that the stationary source is in continuous compliance with the state's emission standards for PM.

Gas Fuel-Burning Equipment:

Monitoring – The monitoring of gas-fired emissions 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-Burning Equipment:

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

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

This means that the trend line for the complete data set predicts that 20% opacity corresponds to a little less than the PM limit for an 18-inch stack. There may be engines that exceed the thresholds but the intent of the standard condition is not to guarantee that each engine that might exceed the PM standard will be tested. The Department expects few, if any, engines to actually be tested under this condition. What the Department does expect is that with the

adopted condition in place, operators that find an opacity above or near the testing threshold will take corrective action necessary to reduce PM emissions. This would achieve the desired environmental outcome without the added cost of testing. The Department expects this to be the case with both thresholds.

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

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

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

Dual Fuel-Burning Equipment:

As long as dual fuel- burning emissions units operate only on gas, monitoring consists of a statement in the operating report indicating only gaseous fuels were used in the equipment during the reporting period. When any of the EU IDs 8, 9, or 12 operates on a backup liquid fuel for more than 400 hours in a calendar year, monitoring as detailed in Condition 12.2 is required for that emissions unit in accordance with Department Policy and Procedure No. 04.02.103, Topic # 2. When any of the EU IDs 8, 9, or 12 operates on a backup liquid fuel for 400 hours or less in a calendar year, monitoring for that emissions unit consists of an annual certification of compliance with the PM standard. The 400-hour trigger for additional monitoring applies to each individual unit and not as a combined total for all units.

Significant Emissions Units under 18 AAC 50.326(d)(1):

For EU IDs 14, 15, and 22, no monitoring is required when these emissions units are insignificant based on actual (EU ID 14, emergency generator) or potential emissions due to Table 2 (EU ID 15) and Condition 28.2 (EU ID 22) that limit either their hours of operation or fuel consumption. As long as the emissions units operate within these limits, they are insignificant by emissions rate as specified in 18 AAC 50.326(e), and no monitoring is required in accordance with Department Policy and Procedure No. 04.02.103, Topic # 3. The Permittee must annually certify compliance under Condition 92 with the PM emissions standard based on reasonable inquiry.

Conditions 13 through 20, Sulfur Compound Emissions Standard and MR&R

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

- 18 AAC 50.055(c) applies to the operation of fuel-burning equipment and industrial processes. EU IDs 8, 9, 12 through 15, 18, and 22 are fuel-burning equipment.

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

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

Liquid Fuels:

For liquid fuel-burning equipment, EU IDs 8, 9, 12, 14, 15, and 22, the MR&R conditions are SPCs XI and XII, adopted into regulation pursuant to AS 46.14.010(e). Sulfur dioxide comes from the sulfur in the liquid hydrocarbon fuel (e.g., diesel or No.2 fuel oil). Fuel sulfur testing will verify compliance. Fuel containing no more than 0.75 percent sulfur by weight will always comply with the emission standard. For fuels with a sulfur content higher than 0.75 percent, the condition requires the Permittee to use Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a)(3), to calculate the SO_2 concentration to show that the standard is not exceeded.

For the liquid-fuel burning EU IDs 12, 14, 15, and 22 to protect the SO_2 ambient air quality standards, the Permittee is required to limit the sulfur contents of diesel fuel burned in the emissions units to concentrations lower than necessary, as shown in Conditions 24.2 and 47.1. Therefore, the MR&R requirements in Condition 16 for compliance with the state SO_2 standard in Condition 13 have been streamlined based on the more stringent fuel sulfur content limits of 0.20 percent by weight (EU IDs 12, 14, and 15) or 15 parts per million by weight (EU ID 22) rather than having two sets of MR&R.

Beyond as noted above, the Department has determined that the standard permit conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No additional emissions unit or stationary source operational or compliance factors indicate that the unit-specific or stationary-source-specific conditions would better meet the requirements. Therefore, the Department concludes that the standard conditions, as modified, 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. Basically, it is the mercaptan that allows the presence of gas to be detected by its odor, so it is naturally used as a leak detector. However, by that same token, it can raise 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_2S concentration, in the natural gas fuel due to the presence of mercaptans in the gas supply, which raises the sulfur concentration.

Fuel sulfur testing will verify compliance with the SO_2 emission standard. Fuel gas sulfur is measured as hydrogen sulfide (H_2S) concentration in parts per million by volume (ppmv). Calculations show that 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. Equations to calculate the exhaust gas SO_2 concentrations resulting from the combustion of fuel gas were not included in this permit. Fuel gas with an H_2S concentration of even 10 percent of 4,000 ppmv is currently not available in Alaska and is not projected to be available during the life of this permit. Conditions 24.1.a through 24.1.d streamlines MR&R requirements for

compliance with the state sulfur compound emission standard in Condition 13 by requiring compliance with the more stringent fuel gas H_2S limit in Condition 24.1 for protection of the SO_2 ambient air quality standards and associated MR&R requirements, rather than having two sets of MR&R.

Conditions 21 through 29, Preconstruction Permit Requirements

Legal Basis: The Permittee is required to comply with all stationary source-specific requirements that were carried forward from previous SIP-approved Permits to Operate (PTO) issued on or before January 17, 1997 and operating permits issued between January 18, 1997 and September 30, 2004, and with all stationary source-specific requirements in EPA PSD permits, SIP-approved construction permits, SIP-approved minor permits, and ORLs established under 18 AAC 50.225. These requirements include Best Available Control Technology (BACT), limits to ensure compliance with the attainment or maintenance of ambient air quality standards or maximum allowable ambient concentrations, and ORLs. Requirements from the permits listed above apply because they were originally developed through case-by-case action under a federally-approved SIP or approved operating permit program.

Factual Basis: Conditions 21 incorporates ORLs developed in Permit to Operate No. 9572-AA009 to protect ambient air quality and avoid PSD Modification thresholds. Other requirements of Permit to Operate No. 9572-AA009 and Construction Permit No. 9872-AC024 were not carried forward because the requirements applied to equipment (EU IDs 1 – 7) that were decommissioned prior to the issuance of Operating Permit No. AQ0075TVP03.

Condition 22 incorporates ORLs with MR&R requirements to avoid classification as a HAP major source, as developed in Permit No. AQ0075CPT03. To stay under the HAPs major thresholds, potential emissions specifically from the crude oil breakout tank, EU ID 21, are limited to no more than 8 tons per 12-month rolling period for any individual HAP and 16.9 tons per 12-month rolling period for the aggregate total of HAPs.

Condition 23 through 29 incorporate terms and conditions as developed in Permit Nos. AQ0075CPT02, AQ0075MSS02, and AQ0075MSS03 for equipment installed in conjunction with the strategic reconfiguration of PS-4. The Department included the provisions in Conditions 24 through 26 to ensure that the Permittee complies with key assumptions of the stationary source's demonstration to protect ambient air quality.

Conditions 27 through 29 are ORLs to avoid PSD modification. The permit incorporates associated MR&R requirements. The permit does not include periodic CO source testing in Condition 27 because two consecutive source tests in 2009-2010 and 2014 showed the short-term CO emission rates were below 56 percent of the vendor rates, and the Permittee elected to use the conservative vendor rates to estimate the CO emissions.

Condition 27 lists the operating hour limits for different load ranges for EU IDs 12 and 13. The TAR for permit AQ0075CPT02 (where the limit originated) states that the limit is 1,040.5 TPY of CO. The 2,160 hours limit for loads less than 50% and hours limit in Equation 1 for loads between 50% and 60% will ensure compliance with the 1,040.5 TPY limit.

Condition 30, Insignificant Emissions Units

Legal Basis: The Permittee is required to meet the state emission standards in 18 AAC 50.055 for all industrial processes and fuel-burning equipment, regardless of size. 18 AAC 50.055 is contained in the federally approved SIP. The Department also added permit conditions for MR&R as required by 40 C.F.R. 71.6(a)(3) and 71.6(c)(1).

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

The Department finds that the insignificant emissions units at this stationary source do not require specific monitoring, recordkeeping, and reporting to ensure compliance under these conditions.

Condition 30.4.a requires certification that the insignificant emissions units did not exceed state emission standards during the previous year and did not emit any prohibited air pollution, based on reasonable inquiry.

The Department used the language in SPC V, adopted by reference under 18 AAC 50.346(b)(4), for the permit condition.

Conditions 31 through 39, NSPS Subpart A Requirements

Legal Basis: The EPA approved Alaska's Part 70 Program granted on November 30, 2001 (40 C.F.R. 70 Appendix A). The Department is the permitting authority for the Part 70 program. As the permitting authority, the Department requires compliance with all permit conditions. Although the EPA has not delegated to the Department the authority to administer the New Source Performance Standard (NSPS) program, NSPS requirements are included in the definition for "applicable requirement" under 40 C.F.R. 71.2, which has been adopted by the Department under 18 AAC 50.040(j)(1).

The NSPS provisions under Subparts *GG and IIII* apply to the stationary source. Therefore, the Department requires compliance with those standards in a Part 70 permit issued under the approved program. However, the Department is unable to change the actual wording of the relevant standard to substitute "the Department" for "the Administrator" in those standards. Since the Department expects access to any permit-related information provided by the Permittee to the EPA, the Department will act on its responsibility as the permitting authority to determine compliance with the standard. To reflect this relationship and for the purposes of this permit, the Department has defined "the Administrator" to mean the "EPA and the Department" for conditions implementing the federal emission standards under Section 4.

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 12 and 13 are subject to NSPS Subpart GG and EU ID 22 is subject to NSPS Subpart IIII. EU IDs 12 and 13 are therefore

subject to NSPS Subpart A requirements that they have not already satisfied. EU ID 22 is subject to NSPS, Subpart A requirements that are not included in NSPS Subpart IIII.[3]

Conditions 31.1 through 31.3 - The Permittee has already complied with the notification requirements in 40 C.F.R. 60.7 (a)(1) for the initial construction and 40 C.F.R. 60.7 (a)(3) for the initial startup of EU IDs 12 and 13. However, the Permittee is still subject to these requirements in the event of a new NSPS affected facility[4] or in the event of a modification or reconstruction of an existing facility[5] into an affected facility.

Condition 31.4 - 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.

Condition 32 – The requirements in 40 C.F.R. 60.7(b) to maintain start-up, shutdown, or malfunction records are applicable to most NSPS affected facilities subject to Subpart A.

Conditions 33 and 34 - NSPS excess emission reporting requirements and summary report form in 40 C.F.R. 60.7(c) & (d) are applicable to EU ID 12 because the EU is a turbine subject to NSPS Subpart GG that uses periodic sulfur monitoring requirements in Condition 44.1.a. 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. Conditions 33 and 34 do not apply to Subpart GG turbines that are monitored under Condition 44.1.b.

Condition 35 – The NSPS general recordkeeping requirements under 40 C.F.R. 60.7(f) requires records retention for at least two years of the measurements required to be maintained by this Part. This requirement is satisfied by Condition 86, which requires at least five years of records retention, in accordance with 40 C.F.R 71.6(a)(3)(ii)(B) adopted under 18 AAC 50.040(j)(4).

Condition 36 - The Permittee has already complied with the initial performance test requirements in 40 C.F.R. 60.8 for EU IDs 12 and 13. 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 37 - Good air pollution control practices in 40 C.F.R. 60.11 are applicable to EU IDs 12 and 13. Per Table 8 to NSPS Subpart IIII, EU ID 22 is not subject to this requirement because the requirement is contained in NSPS Subpart IIII.

Condition 38 - The condition states that any credible evidence may be used to demonstrate compliance or to establish violations of relevant NSPS standards for EU IDs 12 and 13. Per Table 8 to NSPS Subpart IIII, EU ID 22 is not subject to this requirement.

[3] Table 8 to NSPS Subpart IIII lists NSPS Subpart A requirements that do not apply to diesel engines subject to NSPS Subpart IIII.

[4] *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.

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

Condition 39 - Concealment of emissions prohibitions in 40 C.F.R. 60.12 are applicable to EU IDs 12, 13, and 22.

Conditions 40 through 44, NSPS Subpart GG Requirements

Legal Basis: As stated in Condition 40 and in accordance with NSPS Subpart GG 40 C.F.R. 60.330(a) and (b), the subpart applies to stationary gas turbines with a heat input at peak load (maximum load at 60 percent relative humidity, 59 ºF, and 14.7 psi) equal to or greater than 10.7 gigajoules per hour (10 MMBtu/hr), based on the lower heating value of the fuel fired which commenced construction, modification, or reconstruction after October 3, 1977. EU IDs 12 and 13 meet these criteria and are therefore subject to these requirements.

Factual Basis: Conditions 41 and 43 incorporate NSPS Subpart GG NO_X and SO_2 emissions standards applicable to EU IDs 12 and 13, as specified in 40 C.F.R. 60.332(a)(2) for NO_X, and 40 C.F.R. 60.333(b) for SO_2. The Permittee must not cause or allow EU IDs 12 and 13 to violate these standards.

Per Condition 44.1.b 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. The Permittee has elected not to conduct sulfur monitoring as allowed under Condition 44.1.b and has an NSPS Subpart GG applicability determination from EPA dated December 11, 2006, that confirms that the initial fuel gas demonstration under Section 2.3.2.4(a)(2) of Appendix D of Part 75 shows that the fuel gas meets the definition of natural gas as defined by 40 C.F.R. 60.331(u).

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

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

Where:

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

Y = manufacturer’s rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour; and

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

Based on the manufacturer's heat rating at manufacturer’s rated peak load, and assuming fuel bound nitrogen of zero, the NO_X standard is 212 ppmv for EU ID 12 (when firing fuel gas) and EU ID 13, and 205 ppmv for EU ID 12 (when firing diesel fuel).

SO_2 Standard: The Permittee is required to comply with one of the following sulfur requirements for EU IDs 12 and 13 (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 the emissions units to exceed 0.8 percent by weight.

The Permittee elected to limit the fuel sulfur content, as described in option 2.

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

Condition 42, NO_X MR&R

Legal Basis: Conditions 42.1 through 42.3 includes periodic MR&R requirements for all turbines that normally operate for greater than 400 hours in a 12 month period. These additional MR&R requirements are necessary to ensure that turbine emissions comply with the NSPS NO_X standard and is required under 40 C.F.R. 71.6(a)(3) as the subpart 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 NO_X emission limit will inherently comply with the Subpart GG limit at all times and will never need additional testing. After a sufficient body of NO_X 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 NO_X 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, the requirement 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 NO_X emissions at less than or equal to 90 percent of the limit shown in Condition 41, 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 42.1.a(i)(B). The 6-month trigger identifies when Condition 42.1.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 42.1.a(i)(B) once it finally triggered Condition 42.1.a(i)(C).

If the most recent performance test showed operations at greater than 90 percent of the emissions listed in Condition 41, 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.

Subpart GG defines "emergency gas turbine[6]" and exempts turbines meeting that definition from the Subpart GG NO_X emission standards, per 40 C.F.R. 60.332(g). Some turbines may be operated as standby equipment but not meet the definition of emergency turbine, so the Department has added a Method 20, ASTM D6522-00, 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 30, 50, 75, and 100 percent load. If testing at these 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 42.1.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. The intent is to match 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 NO_X 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 44, SO_2 MR&R

Legal Basis: MR&R requirements for this condition are described in NSPS Subpart GG and have been referenced here. These MR&R requirements are necessary to ensure that

[6] 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.

turbine emissions comply with the Subpart GG SO_2 standard, as required under 40 C.F.R. 71.6(a)(3) and in accordance with corresponding MR&R requirements provided under NSPS Subpart GG.

Factual Basis: Conditions 44.1 through 44.4 includes MR&R requirements for all turbines subject to the NSPS Subpart GG SO_2 emissions standards. The Department added gap-filling recordkeeping and reporting requirements outside of the Subpart GG requirements to ensure compliance with the NSPS SO_2 standard when the Permittee uses a method under 40 C.F.R. 60.334(h)(3) that does not require continuous sulfur monitoring.

Condition 44.1 incorporates NSPS Subpart GG fuel sulfur monitoring requirements. Per 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. The Permittee submitted a demonstration to EPA, pursuant to 40 C.F.R. 60.334(h)(3), to show that the fuel gas combusted at the stationary source meets the definition of natural gas as defined by 40 C.F.R. 60.331(u). EPA confirmed by letter dated December 11, 2006, that the stationary source has adequately demonstrated that the total sulfur and methane content of the fuel gas meets the definition of fuel gas found in 40 C.F.R. 60.331(u). However, the EPA demonstration used representative fuel sampling data under 40 C.F.R. 60.334(h)(3)(ii) and Section 2.3.2.4(a)(2) of Appendix D of Part 75 to show that the fuel gas meets the definition of natural gas as defined by 40 C.F.R. 60.331(u). Therefore, on-going sampling under Section 2.3.2.4 of Appendix D of Part 75 or the gas quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract under 40 C.F.R. 60.334(h)(3)(i) is required. The Permittee already supplies the necessary fuel gas information to demonstrate compliance with the sulfur requirement in Condition 44.1.b under the ORL for ambient air quality protection in Condition 24.1. Therefore, the Department added recordkeeping Condition 44.3 and a compliance certification under the reporting Condition 44.4.b to gap fill and ensure compliance with the Subpart GG sulfur requirement for EU IDs 12 and 13 when they burn natural gas. Sulfur monitoring under Condition 44.1.a and reporting under Conditions 33, 34, and 44.4.a is required when the EU ID 12 burns fuel oil.

Conditions 45 through 50, 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 22 is subject to Subpart IIII under 40 C.F.R. 60.4200 because it was constructed after the applicability date.

Factual Basis: These conditions incorporate the NSPS Subpart IIII emissions standards applicable to EU ID 22. The Permittee may not cause or allow EU ID 22 to violate these standards. These conditions also provide MR&R, specifically called out within the Subpart. The Permittee is also required to operate and maintain the stationary CI ICE according to the manufacturer's written instructions and change only those settings that are permitted by the engine manufacturer for the life of the engine.

Emission standards that apply to Subpart IIII-affected CI ICE depend on several factors, including, but not limited to, the unit's purpose (whether emergency or non-emergency), model year, displacement in liters/cylinder (L/cyl), and location. Some of this information is provided in Table 1 of the permit. EU 22 was manufactured in 2009 and is subject to Tier 2 standards as outlined in 40 C.F.R. 1039, Appendix I (Table 2).

Condition 47 specifies that EU ID 22 must only burn ultra-low sulfur diesel and contains monitoring and recordkeeping requirements for the fuel burned. The Department has also added Conditions 49.3 and 49.4 to provide compliance monitoring for the fuel requirements under the Condition 47.1.

The NSPS GAPCP requirements provided in 40 C.F.R. 60.4211(a), as reflected in Condition 46, suffices the State GAPCP requirement under 18 AAC 50.346(b)(5). MR&R requirements are provided in Conditions 49 through 50.

The provisions of NSPS Subpart IIII listed in Conditions 45 through 50 are current as amended through August 30, 2024. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

Condition 51, NESHAP Subpart A Requirements

Legal Basis: Most sources subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements are subject to NESHAP Subpart A. This stationary source is subject to 40 C.F.R. 63 Subparts ZZZZ and therefore is subject to the general provisions of Subpart A as specified in the provisions for the applicability of NESHAP Subpart A in Table 8 to NESHAP Subpart ZZZZ.

Factual Basis: Subpart A contains the general requirements applicable to all affected sources subject to NESHAP. In general, the intent of NESHAP is to regulate specific categories of stationary sources that emit or have the potential to emit one or more hazardous air pollutants.

Conditions 52 through 57, NESHAPs Subpart ZZZZ Requirements

Legal Basis: The Department has incorporated by reference the NESHAP requirements for specific industrial activities, as listed in 18 AAC 50.040(c). NESHAP Subpart ZZZZ applies to owners and operators of any existing, new, or reconstructed stationary reciprocating internal combustion engines (RICE), whose construction commenced before June 12, 2006, located at major or area sources of HAP emissions, excluding stationary RICE units being tested at a stationary RICE test cell/stand. PS-4 is an area source that owns and operates RICE units EU IDs 14, 15, and 22, subject to NESHAP Subpart ZZZZ.

EU IDs 14 and 15 are existing stationary RICE, which were manufactured and commenced construction in 2005; therefore, for EU IDs 14 and 15, the Permittee shall at all times comply with Conditions 53 through 57. Whereas EU ID 22 is a new stationary RICE whose construction commenced after June 12, 2006; therefore, for EU ID 22, the Permittee must comply with the requirements of 40 C.F.R. 63, Subpart ZZZZ by meeting the requirements of 40 C.F.R. 60, Subpart IIII, as specified by Condition 52.

Factual Basis: These conditions incorporate the current (as amended through August 30, 2024) NESHAP Subpart ZZZZ requirements applicable to the existing stationary RICE, EU

IDs 14 and 15. Due to the small size of non-emergency engine EU ID 15 (65 kW) and the emergency status of EU ID 14, these EU do not have to meet the numerical CO emission limitations (therefore, no operational limitations apply as well) under Subpart ZZZZ. However, these EUs must meet the work and management practices for stationary non-emergency CI RICE with a rating of less than or equal to 300 Hp and emergency stationary CI RICE and black start stationary CI RICE as specified in Table 2d items 1 and 4.

The applicable work and management practices standards for EU ID 14 are provided in Condition 54.1 and the applicable work and management practices standards for EU ID 15 are provided in Condition 54.2. The NESHAP Good Air Pollution Control Practices requirement provided in 40 C.F.R. 63.6605(b) and 63.6625(e), as reflected in Condition 53, suffices the State Good Air Pollution Control Practices requirement under 18 AAC 50.346(b)(5).

The Permittee must comply with the recordkeeping requirements of 40 C.F.R. 63.6655(e) and 40 C.F.R. 63.6660, as set out in Condition 56. The reporting requirements are provided in Condition 57. The Permittee is required to include reports of deviations from NESHAP Subparts A and ZZZZ requirements with the semiannual operating reports, per 40 C.F.R. 63.6650(f).

The Permittee is exempt from the subpart's fuel requirements per 40 C.F.R. 63.6604(d), and from the notification requirements per 40 C.F.R. 63.6645(a)(5), since none of the affected emissions units are subject to numerical emission standards.

Condition 58, Asbestos NESHAP

Legal Basis: The requirements of 40 C.F.R. 61 are applicable requirements for Title V permitting purposes, as stated in item 4 of the "applicable requirement" definition under 40 C.F.R. 71.2. The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M and associated general provisions under Subpart A, as adopted by reference under 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. ADEC received delegation for §61.145 and §61.154 of Subpart M (Asbestos), along with other sections and appendices which are referenced in §61.145, as §61.145 applies to sources required to obtain an operating permit under Alaska's regulations. ADEC has not received delegation for Subpart M for sources not required to obtain an operating permit under Alaska's regulations.

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.

Conditions 59 through 61, Protection of Stratospheric Ozone, 40 C.F.R. 82

Legal Basis: The requirements of 40 C.F.R. 82 are applicable requirements for Title V permitting purposes, as stated in item 12 of the "applicable requirement" definition under 40 C.F.R. 71.2. Condition 59 requires compliance with the applicable requirements in 40 C.F.R. 82, as adopted by reference under 18 AAC 50.040(d). The requirements apply if the Permittee engages in the recycling or disposal of certain refrigerants. The condition requires the Permittee to comply with the standards for recycling and emission reduction of refrigerants in 40 C.F.R. 82, Subpart F.

Conditions 60 and 61 also require compliance with the applicable requirement adopted under 18 AAC 50.040(d). Condition 60 prohibitions apply to all stationary sources that use substitutes for ozone-depleting compounds. Condition 61 prohibitions apply to all stationary sources that use halon for extinguishing fires and inert gas to reduce explosion risk. These conditions prohibit the Permittee from causing or allowing violations of these requirements. PS-4 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. 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 require compliance with this federal regulation.

Condition 62, NESHAPs Applicability Determination Requirements

Legal Basis: This condition requires the Permittee to determine NESHAP rule applicability and requires recordkeeping 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 EPA if the stationary source becomes an affected source subject to a standard promulgated by EPA under 40 C.F.R. 63, comply with any NESHAP standard that becomes applicable to the source by the compliance date established in the applicable subpart, and to keep records of applicability determinations and make those records available to the Department.

Conditions 63 through 65, Standard Terms and Conditions

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

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

Condition 66, Administration Fees

Legal Basis: This condition requires compliance with the applicable fee requirements in 18 AAC 50.400-403. As stated in 18 AAC 50.326(j)(1), the provisions of 18 AAC 50.400 through 50.430 are applicable and 40 C.F.R. 71.9 is not applicable.

Factual Basis: Paying administration fees is required as part of obtaining and holding a permit with the Department or as a fee for a Department action. The regulations in 18 AAC 50.400-403 specify the amount, payment period, and the frequency of fees applicable to a permit action.

Conditions 67 and 68, Emission Fees

Legal Basis: These conditions require compliance with the applicable fee requirements in 18 AAC 50.410-420. The regulations specify the time period for the assessable emissions and the methods the Permittee may use to calculate assessable emissions. As stated in 18 AAC 50.326(j)(1), the provisions of 18 AAC 50.400 through 50.430 are applicable and 40 C.F.R. 71.9 is not applicable.

Factual Basis: The Department used the language in SPC I, adopted by reference under 18 AAC 50.346(b), for the permit. SPC I requires the Permittee to pay fees in accordance with the Department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date. The assessable emissions are the lesser of the stationary source's potential or projected emissions of each air pollutant.

SPC I also allows the Permittee to recalculate the stationary source's assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1), assessable emissions are based on each air pollutant. Therefore, fees shall be paid on any pollutant emitted whether or not the permit contains any limitation for that pollutant.

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

Condition 69, Good Air Pollution Control Practice (GAPCP)

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

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

The Department adopted this condition under 18 AAC 50.346(b) as SPC VI pursuant to AS 46.14.010(e). Records kept in accordance with Condition 69.2 for units subject to GAPCP need to be maintained for 5 years in accordance with Condition 86 even if a unit is no longer subject to this condition.

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

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

Condition 70, Dilution

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

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

Condition 71, Reasonable Precautions to Prevent Fugitive Dust

Legal Basis: This condition reiterates 18 AAC 50.045(d), which requires a person to use reasonable precautions when handling, storing or transporting bulk materials or engaging in an industrial activity. 18 AAC 50.045 is included in the SIP approved by EPA and, therefore, is an applicable requirement, per 40 C.F.R. 71.2.

This requirement applies because the Permittee has an emission unit or activity listed under Table 7 of 18 AAC 50.346(c). The listed emission units and activities in Table 7 are: coal-fired boilers; coal handling facilities; construction of gravel pads or roads that are part of a permitted stationary source or other construction that has the potential to generate fugitive dust that reaches ambient air; commercial/industrial/municipal solid waste, air curtain, and medical waste incinerators; sewage sludge incinerators not using wet methods to handle that ash; mines; urea manufacturing; soil remediation units; or dirt roads under the control of the operator with frequent vehicle traffic.

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

Condition 72, Stack Injection

Legal Basis: This condition reiterates 18 AAC 50.055(g), which 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). 18 AAC 50.055 is included in the SIP approved by EPA and, therefore, is an applicable requirement, per 40 C.F.R. 71.2.

Stack injection requirements apply to stacks of emissions units at a stationary source constructed or modified after November 1, 1982.

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

Condition 73, Air Pollution Prohibited

Legal Basis: This condition requires compliance with 18 AAC 50.110. 18 AAC 50.110 is included in the SIP approved by EPA and, therefore, is an applicable requirement, per 40 C.F.R. 71.2. The condition prohibits the Permittee from causing any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property. The Department also included permit conditions for MR&R as required by 40 C.F.R. 71.6(a)(3) and 71.6(c)(1).

Factual Basis: The Department used the language in SPC II for the permit. This condition spells out how to monitor, record, and report prohibited air pollution. While the other permit conditions and emissions limitations should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

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

Condition 74, Technology-Based Emission Standard

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

Factual Basis: The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with Condition 90. Excess emission reporting under Condition 90 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 90.

Condition 75, Open Burning

Legal Basis: The condition requires the Permittee to comply with the regulatory requirements in 18 AAC 50.065 when conducting open burning at the stationary source. 18 AAC 50.065 is included in the SIP approved by EPA and, therefore, is an applicable requirement, per 40 C.F.R. 71.2. The state open burning regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the stationary source.

Factual Basis: The Permittee may conduct open burning by following the provisions of 18 AAC 50.065 and by following the Department guidelines posted at the website http://dec.alaska.gov/air/air-permit/open-burn-info. Condition 75.1 requires the Permittee to keep records to demonstrate compliance with the standards for conducting open burning.

More extensive monitoring and recordkeeping is not warranted because the Permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored. Compliance is demonstrated through annual certification required under Condition 92.

Condition 76, Requested Source Tests

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

Factual Basis: This condition applies because this is a standard condition to be included in all operating permits, as specified in 18 AAC 50.345(a). Compliance is demonstrated through the submission of the required source test plan and report.

Conditions 77 through 79, Operating Conditions, Reference Test Methods, Excess Air Requirements

Legal Basis: Conditions 77 and 79 require compliance with the applicable requirements in 18 AAC 50.220(b) and (c)(3), which are included in the SIP approved by EPA. Condition 78 specifies source test methods, as required by 40 C.F.R. 71.6(a)(3)(i) and 71.6(c)(1). These requirements apply because the Permittee is required by the permit to conduct source tests or a source test may be requested by the Department. The Permittee is required to conduct source tests in the manner set out in Conditions 77 through 79.

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

Condition 80, Test Exemption

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

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

Conditions 81 through 84, Test Deadline Extension, Test Plans, Notifications and Reports

Legal Basis: Condition 81 contains the requirement in 18 AAC 50.345(l), while Conditions 82 through 84 require compliance with the applicable requirements in 18 AAC 50.345(m) through (o). The requirements in 18 AAC 50.345(l) through (o) are included in the SIP approved by the EPA. These requirements constitute standard conditions that must be included in each operating permit, as specified in 18 AAC 50.345(a). Additionally, these requirements apply because the Permittee is required to conduct source tests as set out by this permit or as requested by the Department.

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

Condition 85, PM Calculations

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

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

Condition 86, Recordkeeping Requirements

Legal Basis: This condition requires the Permittee to keep records in accordance with 40 C.F.R. 71.6(a)(3)(ii), which the Department adopted by reference under 18 AAC 50.040(j)(4). It also incorporates the general NSPS recordkeeping requirement under 40 C. F. R. 60.7(f), which the Department adopted by reference under 18 AAC 50.040(a)(1).

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 evidence of compliance with this requirement.

40 C.F.R. 60.7(f) requires records retention for at least two years of the measurements required to be maintained by this Part while 40 C.F.R. 71.6(a)(3)(ii) requires at least five years of records retention. The five-year records retention requirement in Condition 86 satisfies both 40 C.F.R. 60.7(f) and 40 C.F.R. 71.6(a)(3)(ii).

Condition 87, Certification

Legal Basis: All operating permits must contain a requirement to certify permit applications, reports, affirmations, or compliance certification, per 18 AAC 50.345(j). The requirement is a part of the SIP approved by EPA.

Factual Basis: The Department used the language in SPC XVII, adopted by reference under 18 AAC 50.346(b)(10), for the permit condition. The requirement in 18 AAC 50.345(j) is a standard condition that must be included in each operating permit, as specified in 18 AAC 50.345(a). 18 AAC 50.345(j) allows the excess emissions reports to be certified with the operating report. However, the Department reminds the Permittee that excess emissions reports must be submitted according to the applicable deadline given in Condition 90 and must not be withheld from the Department until the deadline for submittal of an operating report. This condition supplements the reporting requirements of this permit. The certification statement through electronic signature and options for submittal provide paperless options for reporting without compelling Permittees to any specific means of submission.

Condition 88, Submittals

Legal Basis: This condition applies because the Permittee is required to send reports to the Department and supplements the standard reporting and notification requirements of this permit.

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

Condition 89, Information Requests

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

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

Condition 90 and Section 13, Excess Emission and Permit Deviation Reports and Notification Form

Legal Basis: This condition requires the Permittee to comply with the requirements in 18 AAC 50.235(a)(2) and 18 AAC 50.240(c). Also, the Permittee is required to notify the Department when emissions or operations deviate from the requirements of the permit.

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

The Department used the language in SPC III and IV, adopted by reference under 18 AAC 50.346(b)(2), for the permit condition. The Department used the notification form in SPC IV adopted by reference under 18 AAC 50.346(b)(3), for the notification requirements (see Section 13) for the notification requirements.

Condition 91, Operating Reports

Legal Basis: This condition specifies reporting requirements as required by 40 C.F.R. 71.6(a)(3)(iii)(A) which the Department has adopted by reference under 18 AAC 50.040(j)(4).

Factual Basis: The Department used the language in SPC VII, adopted by reference under 18 AAC 50.346(b)(6), for the permit condition. The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements identified elsewhere in the permit.

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

Condition 92, Annual Compliance Certification

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

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

Condition 92.2 provides clarification of transition periods between an expiring permit and a renewal permit to ensure that the Permittee certifies compliance with the permit terms and conditions of the permit that was in effect during those partial date periods involved in the transition. No format is specified: the Permittee may provide one report certifying compliance with each permit term or condition for each of the effective permits during the certification period, or may choose to provide two reports – one certifying compliance with

permit terms and conditions from January 1 until the date of expiration of the old permit, and a second report certifying compliance with terms and conditions in effect from the effective date of the renewal permit until December 31.

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

Condition 93, Emission Inventory Reporting

Legal Basis: This condition requires the Permittee to submit emissions data to the state so the state is able to satisfy the federal requirement to submit emission inventory data from point sources to the EPA as required under 40 C.F.R. 51.15 and 51.321. The federal emission inventory requirement applies to sources defined as point sources in 40 C.F.R. 51.50. Under 18 AAC 50.275, the state also requires reporting of emissions triennially for stationary sources with an air quality permit, regardless of permit classification. This includes sources that do not meet the federal emission thresholds in Table 1 to Appendix A of 40 C.F.R. 51 Subpart A. The state must report emissions data as described in 40 C.F.R 51.15 and the data elements in Tables 2a and 2b to Appendix A of 40 C.F.R. 51 Subpart A to EPA.

Factual Basis: Except as noted in the last paragraph, the Department used the language in SPC XV, as adopted by reference under 18 AAC 50.346(b)(8), for the permit condition.

The emission inventory data is due to EPA 12 months after the end of the reporting year (40 C.F.R. 51.30(a)(1) and (b)(1)). Permittees have until April 30th to compile and submit the data to the Department. To expedite the Department's process of transferring data into EPA's electronic reporting system, the Department encourages Permittees to submit the emission inventory through the Department's electronic emission inventory submission system in the Permittee Portal on the Department's Air Online Services webpage http://dec.alaska.gov/Applications/Air/airtoolsweb/. A myAlaska account and profile are needed to gain access to the Permittee Portal. Other options are to submit the emission inventory via mail, email, or fax.

Detailed instructions on completing and submitting the emission inventory and the report form are available at the Point Source Emission Inventory page http://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory by clicking the Emission Inventory Instructions button. The emission inventory instructions and report form may also be obtained by contacting the Department.

To ensure that the Department's electronic system reports complete information to the National Emissions Inventory, stationary sources with air quality permits are required to submit with each report emissions data described in 40 C.F.R. 51.15 and the data elements in Tables 2a and 2b to Appendix A of 40 C.F.R. 51 Subpart A, as applicable. Title V stationary sources with potential annual emissions greater than or equal to any of the emission thresholds shown in Condition 93.1 for Type A (large) sources, as listed in Table 1 to Appendix A of 40 C.F.R. 51 Subpart A, are required to report emission inventory data every year for the previous calendar year (also known as the inventory year). For triennial inventory years, Type A sources only need to submit one report, not both an annual report and a separate triennial report.

Stationary sources, excluding owner requested limits (ORLs) issued under 18 AAC 50.225 and preapproved emission limits (PAELs) issued under 18 AAC 50.230, that do not meet any of the emission thresholds in Condition 93.1 for Type A (large) sources are required to report emission inventory data every third year (i.e., triennially) for the previous inventory year under Condition 93.2. As of the issue date of this permit, the Pump Station 4 (PS-4) is required to report under Condition 93.2.

The Department has modified the triennial reporting requirements under Condition 93.2 by including stationary sources' PTEs that are below the thresholds for annual reporting in Condition 93.1, instead of pollutant-specific thresholds for attainment and non-attainment areas. Thus, all stationary sources regardless of permit classification (excluding ORLs and PAELs) are covered under this condition, to capture the new requirements found in 18 AAC 50.275, effective September 7, 2022. Because the stationary source's PTE for criteria pollutants are below the thresholds for every-year emissions inventory reporting, the Department has streamlined SPC XV to include only triennial reporting requirements. Beyond as noted, the Department has determined that the standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3).

Condition 94, Consistency of Reporting Methodologies

Legal Basis: Condition 94 is from 18 AAC 50.275(a) and requires all stationary sources, regardless of permit classification (with the exception of owner requested limits (ORLs) issued under 18 AAC 50.225 and preapproved emission limits (PAELs) issued under 18 AAC 50.230), to report actual emissions to the state so that the state can meet its obligation under 40 C.F.R. 51. Condition 94.1 is from 18 AAC 50.275(b) and requires consistency on the stationary sources' actual emissions reports submitted for NEI and the state's assessable emissions.

Factual Basis: The regulation was added to 18 AAC 50 on September 7, 2022, so as to include all stationary sources required to report actual emissions for the purpose of the federal emissions inventory and to avoid inconsistencies in actual emissions reports submitted. When reporting actual emissions under Condition 93 or assessable emissions under Condition 67.2, consistent emission factors and calculation methods shall be used for all reporting requirements for the stationary source.

Condition 95, NSPS and NESHAP Reports and Waivers

Legal Basis: The Permittee is required to provide the Department a copy of each report submitted to EPA as required for emissions units subject to NSPS or NESHAP federal regulations under 18 AAC 50.326(j)(4). Appendix A to 40 C.F.R. 70 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. For those notices and reports submitted through EPA's online reporting system, CDX-CEDRI, the Permittee is not required to submit a duplicate copy to the Department; a statement about the online submittal in the operating report would suffice.

Condition 96, Federal Electronic Reporting Allowance

Legal Basis: On September 25, 2024, EPA published a notice in the Federal Register (Vol. 89, No. 186, page 78300) allowing stationary sources subject to federal rules to electronically submit reports, notifications, or other submission types to CEDRI, consistent with the provisions of the Cross-Media Electronic Reporting Rule (CROMERR), codified under 40 C.F.R. 3.

Factual Basis: The electronic reporting provisions in Condition 96 is a general advisory option for stationary sources subject to federal rules to facilitate and streamline reporting requirements, in lieu of paper or email format. CROMERR establishes electronic reporting as an acceptable regulatory alternative to paper reporting and establishes requirements to assure that electronic documents are as legally dependable as their paper counterparts. The submittals must be in acceptable digital formats. *Acceptable digital formats* are file types that are compatible with CEDRI or other EPA electronic document receiving system that the Administrator may designate.

Condition 97, Permit Applications and Submittals

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

Factual Basis: The Department used the language in SPC XIV, adopted by reference under 18 AAC 50.346(b)(7), for the permit condition. The condition directs the applicant to send a copy of each application for modification or renewal of this permit to the EPA. Condition 97.2 lists the methods, in EPA's preferred order, to which the applicant may submit the application documents, as specified in the EPA's February 12, 2024, memorandum guidance for Submitting Air Permits to EPA Region 10. This condition shifts the burden of compliance with 40 C.F.R. 71.10(d)(1) from the Department to the Permittee as allowed under 40 C.F.R. 71.10(d)(1).

Conditions 98 through 100, Permit Changes and Revisions Requirements

Legal Basis: The Permittee is obligated to notify the Department of certain off-permit source changes and operational changes under 18 AAC 50.326(j)(4). 40 C.F.R. 71.6(a)(8), (12), and (13), incorporated by reference under 18 AAC 50.040(j), require that these provisions be included in operating permits.

Factual Basis: 40 C.F.R. 71.6(a)(12) and (13), as reflected in Conditions 99 and 100, respectively, specify changes that may be made without a permit revision, and 40 C.F.R. 71.6(a)(8) (Condition 98) states permit revisions are not required for some emissions trading and similar programs.

The Permittee did not request trading of emission increases and decreases as described in 40 C.F.R. 71.6(a)(13)(iii); therefore, language addressing these provisions has not been included in this permit as part of Condition 98.

Condition 101, Permit Renewal

Legal Basis: The Permittee must submit a timely and complete operating permit renewal application if the Permittee intends to continue source operations in accordance with the operating permit program. The obligations for a timely and complete operating permit

application are in 40 C.F.R. 71.5(a) – (c), adopted by reference in 18 AAC 50.040(j)(3), and 18 AAC 50.326(c).

Factual Basis: In accordance with AS 46.14.230(a), this operating permit is issued for a fixed term of five years after the date of issuance, unless a shorter term is requested by the permit applicant. The Permittee is required to submit an application for permit renewal by the specific dates applicable to the stationary source as listed in this condition, according to the submittal instructions in Conditions 88 and 97. 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 remits 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, as long as an application has been submitted within the timeframe specified 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.

Conditions 102 through 107, General Compliance Requirements and Schedule

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

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

Conditions 108 and 109, Permit Shield

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

Factual Basis: Table 4 of Operating Permit No. AQ0075TVP05 shows the permit shield that the Department granted to the Permittee. The permit conditions set forth the requirements that the Department determined were not applicable to the stationary source at the time of permit issuance. The Department based the determinations on the permit application, past operating permit, Title I permits, and inspection reports. 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.

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: _____