Alaska Department of Environmental Conservation
Air Permits Program

Public Comment Date: September 14, 2021
Alyeska Pipeline Service Company
Trans Alaska Pipeline System – Pump Station 4

STATEMENT OF BASIS
for the terms and conditions of
Permit No. AQ0075TVP04

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INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. AQ0075TVP04.

STATIONARY SOURCE IDENTIFICATION

Section 1 of Operating Permit No. AQ0075TVP04 contains information on the stationary source as provided in the Title V permit application.

The stationary source 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 Standard Industrial Classification code for this stationary source is 4612 – Crude Petroleum Pipelines. The North American Industrial Classification System code for this stationary source is 486110 – Pipeline Transportation of Crude Oil.

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

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 (EUs) at PS-4 that have specific monitoring, recordkeeping, and reporting requirements are listed in Table A of Operating Permit No. AQ0075TVP04. These EUs include two dual fuel-fired boilers (EU IDs 11 and 12), a dual-fired heater (EU ID 13), two turbine two turbine drivers for generators, five diesel-fired internal combustion engine drivers, two heaters, eleven miscellaneous gas-fired shop heaters, and one breakout tank. EU IDs 1 – 7, 11, 19, and 20 previously included in initial Title V Operating Permit Nos. AQ0075TVP01 and AQ0075TVP02 have been permanently shut down as part of Strategic Reconfiguration (SR). The majority of the emission units operate using gas (commonly called "fuel gas") supplied from the natural gas produced by the North Slope petroleum fields. This fuel gas is supplied to the stationary source via a pipeline. In the event fuel gas is not available, many of the units are also allowed to operate on liquid (distillate) fuel on a limited basis. EU IDs 10, 14, 15, and 22 operate exclusively on distillate fuel. EU ID 22 was added during renewal processing from AQ0075MSS03.

Table A 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 from PS-4 as indicated in the application and verified by the Department is shown in the table below.

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

Emissions	NO_X	CO	PM_{10}	SO_2	VOC	CO_2e[1]	HAPs[2]	Total[3]
PTE	178.6	1,060.7	10.3	19.8	364.9	154,060	16.0	1,635
Assessable PTE	179	1,061	10	20	365	0	0	1,635

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. 8.7 tpy N-hexane is the biggest contributor to the HAP emissions. VOC emissions include HAPs.
3. Total PTE and total assessable PTE shown in the table do not include CO_2e and HAPs.

The assessable PTE listed under Condition 55.1 is the sum of the PTE of each individual air pollutant, other than greenhouse gases (GHGs), for which the stationary source has PTE of 10 TPY or greater. The emissions listed in Table F 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

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

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

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.

AIR QUALITY PERMITS

Permits to Operate

No previous air quality control permit-to-operate exists for this stationary source.

The most recent 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. All stationary source-specific requirements established in this previous permit are included in the Title V operating permit, as described in Table F of Operating Permit No. AQ0075TVP02.

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 effective stationary source-specific requirements established in this Title I permit are included in this renewal Operating Permit No. AQ0075TVP02, as described in Table F of Operating Permit No. AQ0075TVP02.

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 Nos. 9572-AA009 and 9872-AC024) to 36 ppmv H_2S. This revision was not carried forward into this renewal Title V Operating Permit No. AQ0075TVP02 because the allowable fuel gas H_2S content was raised to 150 ppmv in Construction Permit No. AQ0075CPT02. See Table G of Operating Permit No. AQ0075TVP02.

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. The effective requirements in Permit No. AQ0075CPT02 are now being carried forward into this renewal Title V Permit No. AQ0075TVP02, as described in Table H of Operating Permit No. AQ0075TVP02.

Construction Permit No. AQ0075CPT03 was issued to the Permittee on October 28, 2005. This permit implemented owner requested emission limits to cap the crude oil breakout tank's (EU ID 21) emissions and thereby ensure that PS-4 is a HAP minor source. All stationary source-specific requirements established in this previous permit are included in the TV Permit No. AQ0075TVP02, as described in Table J of Operating Permit No. AQ0075TVP02.

Minor Permit No. AQ0075MSS01 was issued on June 22, 2006 to revise terms and conditions of Permit No. AQ0075CPT02 for the strategic reconfiguration. Specifically, the Permittee decided not to install the boilers, EU IDs 16 and 17; and instead add 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 terms and conditions of 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 effective stationary source-specific requirements in Minor Permit No. AQ0075MSS02 were carried forward into the Title V Permit No. AQ0075TVP02, as described in Table I of Operating Permit No. AQ0075TVP02.

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 effective stationary-source specific requirements in Minor Permit No. AQ0075MSS03 were carried forward into Title V Permit No. AQ0075TVP02.

Title V Operating Permits

Under AS 46.14.190, the owner or operator has requested multiple operating permits for this stationary source.

Permit No. AQ0075TVP01. The Permittee submitted an application for a 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 initial Operating Permit No. AQ0075TVP01.

Permit No. AQ0075TVP02. The Permittee submitted an application for a renewal to 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 also to request for permit shield from the requirements of the subpart. The Department concurred with the Permittee's assessment and, therefore, granted the permit shield request in this renewal permit. Upon request of the Department, the Permittee provided relevant additional information by e-mail 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 also to request for a permit shield from the requirements of the subpart. The Department concurred with the Permittee's assessment regarding inapplicability of 40 C.F.R. 63 Subpart HHHHHH and has added a shield.

On July 24, 2009, the Department received an e-mail and attached notification letter to EPA from the Permittee regarding the permanent shutdown of the solid waste incinerators from 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 July 22, 2020. The Department public noticed Operating Permit AQ0075TVP04 on Month XX, 2021, and issued the final permit on Month XX, 2021.

COMPLIANCE HISTORY

The stationary source has operated at its current location since 1977. PS-4 is classified as 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 major 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 includes 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 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. Onsite 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 when routine maintenance was being conducted 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, indicate a stationary source generally operating in compliance with its operating permit.

APPLICABLE REQUIREMENTS FROM PRECONSTRUCTION PERMITS

Incorporated by reference at 18 AAC 50.326(j), 40 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. AQ0075TVP04.

Table G below lists the requirements carried over from AQ0075TVP03 into Operating Permit No. AQ0075TVP04 to ensure compliance with the preconstruction permit requirements.

Table G - Comparison of Operating Permit No. AQ0075TVP03 Conditions to Operating Permit No. AQ0075TVP04 Conditions[1]

AQ0075TVP03 Condition No.	Description of Requirement	AQ0075TVP04 Condition No.	How Condition was Revised
Section 1	Source Information Identification Table	Section 1	Updated information for owners and contacts and changed the location to latitude and longitude coordinates
Section 2	Emission Unit Inventory	Section 2	No change
1	Visible Emissions Standard	1	
1.1	VE monitoring for duel-fuel EUs	1.4	

AQ0075TVP03 Condition No.	Description of Requirement	AQ0075TVP04 Condition No.	How Condition was Revised
1.2	VE monitoring for EU ID 10 (EU with actual emissions below significant thresholds)	1.2	Revised to match Standard Permit Conditions VIII and IX (Visible Emissions and Particulate Matter Monitoring Plan for Gas Fuel-Burning and Liquid Fuel-Burning Equipment and Flares). Corrected reference limiting EU ID 22 to emissions below significant threshold from Table B to Condition 23.2.
1.3	VE monitoring for gas units	1.5	
1.4	VE monitoring for EUs with limit causing emissions below significant thresholds	1.1	
1.5	VE monitoring for EU ID 18 (EU with unrestricted potential emissions below significant thresholds)	1.3	
1.6	VE monitoring for EU ID 14 (EU with actual emissions below significant thresholds)	1.2	
2	VE monitoring for gas units	2	
3	VE recordkeeping	3	
4	VE reporting	4	
5	PM emissions standards	5	Revised to match Standard Permit Conditions VIII and IX (Visible Emissions and Particulate Matter Monitoring Plan for Gas Fuel-Burning and Liquid Fuel-Burning Equipment and Flares). Corrected reference limiting EU ID 22 to emissions below significant threshold from Table B to Condition 23.2.
5.1	PM monitoring for duel-fuel EUs	5.4	
5.2	PM monitoring for EU ID 10 (EU with actual emissions below significant thresholds)	5.2	
5.3	PM monitoring for gas units	5.5	
5.4	PM monitoring for EUs with limit causing emissions below significant thresholds	5.1	
5.5	PM monitoring for EU ID 18 (EU with unrestricted potential emissions below significant thresholds)	5.3	
5.6	PM monitoring for EU ID 14 (EU with actual emissions below significant thresholds)	5.2	
6	PM monitoring for liquid fuel-fired engines & turbines	6	
No equivalent	PM recordkeeping	7	
7	PM reporting	8	
No equivalent	PM monitoring for liquid-fired boilers and heaters	9	
No equivalent	PM recordkeeping	10	
No equivalent	PM reporting	11	
8	VE & PM MR&R for duel fuel-fired EUs	12	

AQ0075TVP03 Condition No.	Description of Requirement	AQ0075TVP04 Condition No.	How Condition was Revised
9	Sulfur compound emissions	13	Revised to match Standard Permit Condition XI (Sulfur Compound Emissions Standard).
10 & 11	Sulfur fuel oil monitoring, recordkeeping, & reporting	14	Streamlined with MR&R contained in Condition 19.2
12 – 14	Sulfur fuel gas monitoring, recordkeeping, & reporting	15	Streamlined with MR&R contained in Condition 19.1
15	EU IDs 8 & 9, hour/fuel consumption limit	16	No change
16	EU ID 21, ORL to avoid classification as HAP Major	17	No change
17	Strategic reconfiguration requirements	18	No change
18	Fuel sulfur limits to protect ambient air quality	19	Included the requirement to report the results of sulfur analysis under Condition 19.1.b to make the condition enforceable and removed EUs 19 and 20 from Condition 19.2 that are no longer in operation at the stationary source.
19	EU IDs 12, 14, & 15, ORL for NOx & SO_2	20	No change
20	EU ID 12 stack height requirement	21	No change
21	EU IDs 12 & 13, ORL for CO	22	Corrected the reference to recording temperature in Condition 22.5.b to Condition 22.4 .
22	EU IDs 12, 14, & 15, ORL for NOx	23	No change
23	EU IDs 12, 14, & 15, ORL for SO_2	24	Corrected construction permit reference from AQ0074CPT03 to AQ0075CPT02.
24	Insignificant emission units	25	Revised to match Standard Permit Condition V (Insignificant Emissions Units) and removed reference to significant (per 18 AAC 50.326(D)(1)) EU IDs 10, 14, 15, 18, and 22.
25	NSPS Subpart A Notification	26	No change
26	Startup, shutdown, malfunction requirements	27	No change
27	NSPS Subpart A EEMSP report requirements	28	Used format in new template for clarity and to match language used in the operating permit for Pump Station 3.
28	NSPS Subpart A EEMSP Summary Report Form	29	Used format in new template for clarity and to match language used in the operating permit for Pump Station 3.
29	NSPS Subpart A performance tests	30	Added language from 40 C.F.R. 60.8(a) referencing initial source test timeline.

AQ0075TVP03 Condition No.	Description of Requirement	AQ0075TVP04 Condition No.	How Condition was Revised
30	NSPS good air pollution control practices	31	No change
31	NSPS credible evidence	32	No change
32	NSPS concealment of emissions	33	Included reference to NSPS Subpart IIII emission standards requirements in Conditions 37.
33	NSPS Subpart GG NOx requirements	34	No change
34	Subpart GG SO_2 requirements	35	Used format in new template for clarity and to match language used in the operating permit for Pump Station 3 and updated Footnote 23 specifying that if Condition 35.2.b(ii) is used to demonstrate compliance with the sulfur standard, that at a minimum the amount of fuel sampling data specified in 40 C.F.R. 75, Appendix D, Section 2.3.1.4 or 2.3.2.4 is required pursuant to 40 C.F.R. 60.334(h)(3)(ii). Also, added new recordkeeping and reporting Conditions 35.4 and 35.5.b to gap fill for ensuring compliance.
35	NSPS Subpart IIII requirements	36	Added reference to new monitoring, recordkeeping, and reporting Conditions 41 and 42.
36	Subpart IIII emission standards	37	No change
37	Subpart IIII fuel requirement	38	No change
38	Subpart IIII compliance requirement	39	No change
39	Subpart IIII test methods and procedures	40	No change
No equivalent	Subpart IIII monitoring and recordkeeping	41	Added new condition to make Conditions 37 and 38 enforceable.
No equivalent	Subpart IIII reporting	42	Added new condition to make NSPS Subpart IIII Conditions enforceable.
40	NESHAP Subpart M Asbestos	46	Moved condition to after 40 C.F.R. 63 requirements to be consistent with the operating permit for Pump Station 3 and current TVP template.
41	NESHAP Subpart A applicability	43	Modified language to be consistent with the operating permit for Pump Station 3 and current TVP template.
42	NESHAP Subpart ZZZZ applicability	44 & 45	Modified language to be consistent with the operating permit for Pump Station 3 and current TVP template.
43	Subpart ZZZZ management practices for emergency ICE	45.1	Included language, “except as allowed by Condition 45.5” for the alternative oil

AQ0075TVP03 Condition No.	Description of Requirement	AQ0075TVP04 Condition No.	How Condition was Revised
			sampling allowed under 40 C.F.R. 63.6625(i).
44	Subpart ZZZZ management practices for non-emergency ICE	45.2	Included language, "except as allowed by Condition 45.5" for the alternative oil sampling allowed under 40 C.F.R. 63.6625(i).
45.1	Subpart ZZZZ good air pollution control practices	45.3	Modified language to be consistent with the operating permit for Pump Station 3 and current TVP template.
45.2	Subpart ZZZZ operation and maintenance	45.4	Modified language to be consistent with the operating permit for Pump Station 3 and current TVP template.
45.3	Subpart ZZZZ Oil Analyses Program	45.5	Used format in new template for clarity on optional oil analysis program allowed under 40 C.F.R. 63.6625(i).
45.4	Subpart ZZZZ Operating hour limits for emergency engines	45.6	Removed EU ID 15 from condition as it is not considered an emergency engine for the purposes of NESHAP Subpart ZZZZ.
46	Subpart ZZZZ Monitoring	45.7	No change
47	Subpart ZZZZ Recordkeeping	45.8	Moved EU ID Nos. out of Condition 45.8 into sub-conditions because Condition 45.8.a does not apply to non-emergency ICE EU ID 15.
No equivalent	Subpart ZZZZ Reporting	45.9	Included the requirement to report deviations as required by 40 C.F.R. 63.6640(b) and 63.6650(f).
48.1	Subpart F Refrigerant Recycling	47	No change
48.2	Subpart G Significant New Alternatives	48	No change
48.3	Subpart H Halons Emissions Reduction	49	No change
49	NESHAP Applicability Determinations	50	Modified language to be consistent with the operating permit for Pump Station 3 and current TVP template.
50	NSPS and NESHAP Reports	82	Updated with new template language for clarity and moved to new location in template, Section 7 General Recordkeeping and Reporting Requirements.
Section 5	General Conditions	Section 5	Updated Conditions 55, 56, 61 to the new Standard Permit Conditions. Updated Condition 62 to the new template language for clarity and added reference to Condition 38 NSPS Subpart IIII fuel requirements.
Section 6	General Source Testing and Monitoring Requirements	Section 6	Updated Condition 72 to new template language requiring only one copy of

AQ0075TVP03 Condition No.	Description of Requirement	AQ0075TVP04 Condition No.	How Condition was Revised
			source test reports. Updated Condition 73 by deleting the PM equation for soot blowing, grate cleaning, or other maintenance activities that aren't applicable to the EUs at PS-4.
Section 7	General Recordkeeping and Reporting Requirements	Section 7	Updated Conditions 75, 76, 78, 79, and 81 to the new Standard Permit Conditions and updated Condition 80 to the new template language for clarity. Also moved the NSPS and NESHAP reports Condition 82 to this section.
Section 8	Permit Changes and Renewal	Section 8	Updated Condition 83 to the new Standard Permit Condition and updated Conditions 86 and 87 to the new template language for clarity.
Section 9	General Compliance Requirements	Section 9	Updated Conditions with current template language for clarity.
Section 10	Permit Shield	Section 10	No change
Section 11	HAP calculation forms	Section 11	No change
Section 12	Visible Emissions forms	Section 12	Update to new section in current template for clarity.
Section 13	SO_2 material balance calculation form	No equivalent	Deleted this section because liquid fuel sulfur requirements were streamlined with Condition 19.2, which limits liquid sulfur to 0.2 percent by weight.
Section 14	Notification form	Section 13	Update to new section in current template for clarity.
Section 15	Emission inventory form	No equivalent	Deleted as per SPC XV and XVI

NON-APPLICABLE REQUIREMENTS

This section discusses standard conditions that have been removed from the permit or are not included for specific reasons. See Table E (Permit Shield) for more details of items that were not included in the permit 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. AQ0075TVP04. 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 – 10, 12 – 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 Particulate Matter 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, 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 particulate matter emissions from any smoking equipment.

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

Liquid Fuel- 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.

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 copies of the results of all visible emission observations in the operating report.

Dual Fuel-Burning Equipment:

As long as dual fuel-burning equipment 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 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 the emissions unit 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):

EU IDs 10, 14, 15, 18, and 22 do not qualify as insignificant per 18 AAC 50.326(d)(1) because they are subject to operational limits established under a Title I permit, and for EU IDs 10, 14, and 15, standards established under NESHAP Subpart ZZZZ, and for EU ID 22, standards established under NSPS Subpart IIII. EU ID 10 is an intermittently operated firewater pump engine, EU IDs 14, 15, and 22 are intermittently operated diesel engine generators; and EU ID 18 represents 11 miscellaneous shop heaters, thus these units have actual (for EU IDs 10 and 14) and potential (for EU IDs 15, 18, and 22) emissions less than the significant emissions thresholds in 18 AAC 50.326(e). Therefore, the Department has waived visible emissions monitoring for EU IDs 10, 14, 15, 18, and 22, but these units are subject to compliance certification requirements under Condition 80, in accordance with Department Policy and Procedure No. 04.02.103, Topic #3.

Conditions 5 and 6 through 12, Particulate Matter Standard and MR&R

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

- 18 AAC 50.055(b)(1) applies to the operation of fuel-burning equipment and industrial processes. EU IDs 8 – 10, 12 – 15, 18, and 22 are fuel-burning equipment.

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

Factual Basis: Condition 5 prohibits emissions in excess of the applicable state particulate matter standard. MR&R requirements are listed in Conditions 6 through 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, as modified, 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 particulate matter.

Gas Fuel-Burning Equipment:

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

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

Liquid Fuel-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 corresponds to 16.8 % opacity
- For stacks normalized to 10 inches – 0.05 corresponds to 14.3 %

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 equipment operate only on gas, monitoring consists of a statement in the operating report to indicating only gaseous fuels were used in the equipment during the reporting period. When any of these emissions units 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 these emissions units 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 particulate matter 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):

EU IDs 10, 14, 15, 18, and 22 do not qualify as insignificant per 18 AAC 50.326(d)(1) because they are subject to operational limits established under a Title I permit, and for EU IDs 10, 14, and 15, standards established under NESHAP Subpart ZZZZ, and for EU ID 22, standards established under NSPS Subpart IIII. EU ID 10 is an intermittently operated firewater pump engine, EU IDs 14, 15, and 22 are intermittently operated diesel engine generators; and EU ID 18 represents 11 miscellaneous shop heaters, thus these units have actual (for EU IDs 10 and 14) and potential (for EU IDs 15, 18, and 22) emissions less than the significant emissions thresholds in 18 AAC 50.326(e). Therefore, the Department has waived PM monitoring for EU IDs 11 – 13, 15, 16, 20, 21, and 27, but these units are subject to compliance certification requirements under Condition 80, in accordance with Department Policy and Procedure No. 04.02.103, Topic #3.

Conditions 13 through 15, 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 – 10, 12 – 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 oil fired fuel burning equipment, EU IDs 8 – 10, 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 the liquid-fuel burning EU IDs 8 – 10, 12, 14, 15, and 22, to protect the SO_2 ambient air quality standards, the Permittee is required to limit sulfur contents of diesel fuel burned in the emissions units to concentrations lower than necessary, as shown in Condition 19.2. Therefore, the MR&R requirements in Condition 14 for compliance with the state SO_2 standard in Condition 13 have been streamlined based on the more stringent fuel sulfur content limit of 0.20 percent by weight rather than have 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 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 detectant. 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 raise the sulfur concentration.

Fuel sulfur testing will verify compliance with 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 19.1.a through 19.1.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 19.1 for protection of the SO_2 ambient air quality standards and associated MR&R requirements rather than have two sets of MR&R.

Conditions 16 – 24, 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 owner requested limits (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 owner requested limits. Requirements from the permits listed above apply because they were originally developed through case-by-case action under a federally-approved SIP or approved operating permit program.

Factual Basis: Conditions 16 incorporates owner requested limits developed in Permit No. 9572-AA009 to protect ambient air quality and avoid Major Modification permitting thresholds. Other requirements of Permit No. 9572-AA009, Construction Permit Nos. 9872-AC024 and 075CP01 were not carried forward because the requirements applied to equipment (EU IDs 1 – 7) that were decommissioned prior to the issuance of Operating Permit AQ0075TVP03.

Conditions 17 incorporates owner requested limits with monitoring, record keeping and reporting requirements. The limits, as developed in Permit No. AQ0075CPT03, clarify that PS-4 is not a HAP major source. 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 TPY for any individual HAP and 16.9 TPY for the aggregate total of HAPs. The Department made no changes to these terms.

Condition 18 through 24 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 19 through 21 to ensure that the Permittee complies with key assumptions of the stationary source's demonstration to protect ambient air quality.

Conditions 22 through 24 are owner requested limits to avoid PSD major modification. The permit incorporates associated monitoring, recordkeeping, and reporting requirements. The permit does not include periodic CO source testing in Condition 22 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 22 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 tons of CO per year (tpy). The 2,160 hour limit for loads less than 50% and hour limit in Equation 1 for loads between 50% and 60% will ensure compliance with the 1,040.5 tpy limit.

Condition 25, 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 50.050(a) and 50.055 are 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 25.4.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 26 through 33, NSPS Subpart A Requirements

Legal Basis: The EPA approved Alaska's Part 70 Program granted on November 30, 2001 (40 CFR 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 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 26.1 through 26.3 - The Permittee has already complied with the notification requirements in 40 C.F.R. 60.7 (a)(1) for the initial construction and (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 26.4 - 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 27 – The requirements in 40 C.F.R. 60.7(b) to maintain start-up, shutdown, or malfunction records are applicable to all NSPS affected facilities subject to Subpart A.

Conditions 28 and 29 - NSPS excess emission reporting requirements and summary report form in 40 C.F.R. 60.7(c) & (d) are applicable to EU IDs 12 and 13 because they are turbines subject to NSPS Subpart GG that use periodic sulfur monitoring requirements in Condition 35.2.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 28 and 29 do not apply to Subpart GG turbines that are monitored under Condition 35.2.b.

Condition 30 - 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 31 - 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 32 - 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.

Condition 33 - Concealment of emissions prohibitions in 40 C.F.R. 60.12 are applicable to EU IDs 12, 13, and 22.

[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.

Conditions 34 – 35, NSPS Subpart GG Requirements

Legal Basis: These conditions prohibit the Permittee from exceeding emission standards set out in Subpart GG. NSPS Subpart GG applies to stationary gas turbines with a heat input at peak load (maximum load at 60 percent relative humidity, 59 ºF, and 14.7 psi) equal to or greater than 10.7 gigajoules per hour (10 MMBtu/hr), based on the lower heating value of the fuel fired and constructed, modified, or reconstructed after October 3, 1977. EU IDs 12 and 13 meet these criteria and are therefore subject to these requirements.

Factual Basis: Conditions 34 and 35 incorporate NSPS Subpart GG NO_X and sulfur compound emissions standards. The Permittee may not allow equipment to violate these standards. Per Condition 35.2.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 35.2.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 maximum rated heat input (kJ/W-hr), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the affected stationary source. The value of Y shall not exceed 14.4 kJ/W-hr; and

F = 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.

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

Conditions 34.3 – 34.5, NO_X Monitoring, Recordkeeping, and Reporting

Legal Basis: Conditions 34.3 – 34.5 includes periodic monitoring, recordkeeping, and reporting 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 34, 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 34.3.a(i)(B). The 6-month trigger identifies when Condition 34.3.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 34.3.a(i)(B) once it finally triggered Condition 34.3.a(i)(C).

If the most recent performance test showed operations at greater than 90 percent of the emissions listed in Condition 34, 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, 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 34.3.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 35, SO_2 Standard, Monitoring, Recordkeeping, and Reporting

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

Factual Basis: Monitoring, recordkeeping, and reporting requirements for this condition are described in NSPS Subpart GG and have been referenced here. 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) which does not require continuous sulfur monitoring.

Monitoring: Condition 35.2 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

[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.

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 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 Department added recordkeeping and reporting Conditions 35.4 and 35.5.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 35.2.a and reporting under Conditions 28, 29, and 35.5.a is required when EU ID 12 burns fuel oil.

Conditions 36 through 42, 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 for within the Subpart.

Condition 37.3 requires the Permittee to comply with the emission standards in Condition 37.1 over the lifetime of the engine. Condition 39.1 requires the Permittee to operate and maintain the engine according to manufacturer's instructions. Condition 38 specifies EU ID 22 must only burn ultra-low sulfur diesel and contains monitoring and recordkeeping requirements for the fuel burned. Condition 40 requires the Permittee to include the methods used to demonstrate compliance with the emission standards in Condition 37 in the Operating Report required by Condition 79.

Condition 43, NESHAP Subpart A Requirements

Legal Basis: The Permittee must comply with applicable 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 44 through 45, 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 and 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 10, 14, 15, and 22 subject to NESHAP Subpart ZZZZ. 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 44.

Factual Basis: These conditions incorporate the current (as amended through December 4, 2020) NESHAP Subpart ZZZZ requirements applicable to the existing stationary RICE, EU IDs 10, 14, and 15. Due to the small size of non-emergency engine EU ID 15 (65 kW) and the emergency status of EU IDs 10 and 14, these EUs 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 IDs 10 and 14 are provided in Condition 45.1 and the applicable work and management practices standards for EU ID 15 are provided in Condition 45.2. 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 45.3, 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 45.8. The reporting requirements are provided in Condition 45.9. 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 46, 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 47 through 49, 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 47 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 48 and 49 also require compliance with the applicable requirement adopted under 18 AAC 50.040(d). Condition 48 prohibitions apply to all stationary sources that use substitutes for ozone-depleting compounds. Condition 49 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 50, NESHAPs Applicability Determinations

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

Factual Basis: The Permittee has conducted an analysis of the stationary source and determined that it is not a major HAPs stationary source based on emissions. This condition requires the Permittee to notify the Department and EPA if the stationary source becomes an affected source subject to a standard promulgated by EPA under 40 C.F.R. 63 and to keep records of applicability determinations and make those records available to the Department.

Conditions 51 through 53, 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 54, 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 55 and 56, 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 at 10 tons per year or greater (AS 46.14.250(h)(1)).

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 57, Good Air Pollution Control Practice

Legal Basis: This condition requires compliance with the requirements in 18 AAC 50.346(b)(5) and applies to all emissions units, **except** those subject to an emission standard in 40 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 57.2 for units subject to GAPCP need to be maintained for 5 years in accordance with Condition 74 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 58, 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 59, 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 particulate matter from being emitted into the ambient air in accordance with 18 AAC 50.045(d).

Condition 60, 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 61, 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 62, Technology-Based Emission Standard

Legal Basis: The Permittee is required to take reasonable steps to minimize emissions if 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 78. Excess emission reporting under Condition 78 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 78.

Condition 63, 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 63.1 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 80.

Condition 64, 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 65 through 67, Operating Conditions, Reference Test Methods, Excess Air Requirements

Legal Basis: Conditions 65 and 67 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 66 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 65 through 67.

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

Condition 68, Test Exemption

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

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

Conditions 69 through 72, Test Deadline Extension, Test Plans, Notifications and Reports

Legal Basis: Conditions 70 through 72 require compliance with the applicable requirements in 18 AAC 50.345(m) through (o), which are included in the SIP approved by EPA. Condition 69 contains the requirement in 18 AAC 50.345(l). The requirements in 18 AAC 50.345(l) through (o) constitute standard conditions that must be included in each operating permit, as specified in 18 AAC 345(a). These requirements apply because the Permittee is required to conduct source tests as set out by this permit or as requested by the Department.

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

Condition 73, Particulate Matter Calculations

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

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

Condition 74, 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 74 satisfies both 40 C.F.R. 60.7(f) and 40 C.F.R. 71.6(a)(3)(ii).

Condition 75, 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 78 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 76, 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 77, 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 78, Excess Emission and Permit Deviation Reports

Legal Basis: This condition requires the Permittee to comply with the requirements in 18 AAC 50.235(a)(2) and 18 AAC 50.240(c). 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, 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 79, 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 80, 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 80.2 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 81, 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 emission inventory requirement applies to sources defined as point sources in 40 C.F.R. 51.50. 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: The Department used the language in SPC XV, as adopted by reference under 18 AAC 50.346(b)(8), for the permit condition. To increase governmental efficiency and reduce costs associated with information requests that occur on a routine basis, it has been determined that a standard permit condition best fulfills the need to gather the information needed to satisfy the requirements of Subpart A of 40 C.F.R. 51.

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, Title V stationary sources 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 81.1 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.

Title V stationary sources with potential annual emissions greater than or equal to any of the emission thresholds for Type B (small) sources shown in Condition 81.2.a (for attainment and unclassifiable areas) and Condition 81.2.b (for nonattainment areas), as listed in Table 1 to Appendix A of 40 C.F.R. 51 Subpart A, are required to report emission inventory data every third year (i.e., triennially) for the previous inventory year. The emission thresholds for nonattainment areas listed in Condition 81.2.b vary depending on the nonattainment status of the area. As of June 9, 2017, Fairbanks and North Pole urban area have been designated by the federal administrator as "serious nonattainment" for $PM_{2.5}$. Therefore, a stationary source located in Fairbanks and North Pole urban area is subject to the triennial reporting requirement if its potential to emit is greater than or equal to any of the threshold values in Conditions 81.2.b(i), 81.2.b(ii), 81.2.b(iii) (PM_{10} only), and 81.2.b(iv).

As of the issue date of this permit, PS-4 is a *"Type B"* stationary source.

Condition 82, NSPS and NESHAP Reports

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.

Condition 83, 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. The information may be submitted in electronic format, if practicable. 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 84 through 86, Permit Changes and Revisions Requirements

Legal Basis: The Permittee is obligated to notify the Department of certain off-permit source changes and operational changes under18 AAC 50.326(j)(4). 40 C.F.R. 71.6(a)(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 85 and 86, respectively, specify changes that may be made without a permit revision, and 40 C.F.R. 71.6(a)(8) (Condition 84) 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 84.

Condition 87, 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. 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 88 through 93, 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 94 and 95, 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 E of Operating Permit No. AQ0075TVP04 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. Should any of the shielded requirements become applicable during the permit term, the Permittee is required to take necessary steps to comply with all applicable requirements in a timely manner. The Permittee did not request any permit shields beyond those already in Operating Permit AQ0075TVP03.

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: _____