

**Alaska Department of Environmental Conservation
Air Permits Program**

February 2, 2022

**Matanuska Electric Association, Inc.
Eklutna Generation Station**

**STATEMENT OF BASIS
for the terms and conditions of
Permit No. AQ1086TVP02**

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INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit AQ1086TVP02 Revision 1.

STATIONARY SOURCE IDENTIFICATION

Section 1 of Operating Permit AQ1086TVP02 Revision 1 contains information on the stationary source as provided in the Title V permit application.

The Eklutna Generation Station (EGS) is a 171-megawatt electric power plant that provides electricity to homes and businesses from Eagle River to the South Denali Princess Lodge.

The EGS is owned and operated by the Permittee, Matanuska Electric Association, Inc. (MEA). The SIC code for this stationary source is 4911 – Electric services.

EMISSIONS UNIT INVENTORY AND DESCRIPTION

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

The emissions units at the EGS that have specific monitoring, recordkeeping, and reporting requirements are listed in Table A of Operating Permit AQ1086TVP02 Rev. 1 and include ten dual fuel generator engines, two diesel black start generators, two dual fuel auxiliary boilers, a natural gas heater, and a diesel firewater pump. The generator engines are equipped with a selective catalytic reduction (SCR) and catalytic oxidation (CatOx) emissions control system to reduce NO_x, CO, and VOC emissions.

Table A of Operating Permit AQ1086TVP02 Rev. 1 contains information on the emissions units (EUs) regulated by this permit as provided in the application. The table is provided for informational and identification purposes only. Specifically, the emissions unit rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

A summary of the potential to emit (PTE)¹ and assessable PTE as provided in the application for the Eklutna Generation Station, is shown in Table 1.

Table 1 - Emissions Summary, in Tons Per Year (tpy)

Pollutant	NO _x	CO	PM	SO ₂	VOC	CO _{2e}	HAP	Total
PTE	243.95	214.98	221.44	20.98	171.15	753,909.44	16.29	872.50
Assessable PTE	243.95	214.98	221.44	20.98	171.15	0.00	0.00	872.50

Notes:

1. CO_{2e} emissions are defined as the sum of the mass emissions of each individual GHG adjusted for its global warming potential.

¹ "Potential to Emit" or "PTE," as defined in AS 46.14.990(22), 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.

2. Total PTE and total assessable PTE shown in the table do not include CO₂e and HAP.
3. HAP emissions are a subset of either VOC emissions or PM₁₀ emissions and are excluded from the assessable emissions total to avoid double counting.

The assessable PTE listed under Condition 41.1 is the sum of the PTE of each individual air pollutant, other than greenhouse gases (GHGs). The emissions listed in Table 1 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 for Operating Permit AQ1086TVP02 Rev. 1 and are based on the owner requested operating limits from Minor Permit AQ1086MSS03 Revision 1. Emission factors are from manufacturer data and AP-42. The highest PTE for a single HAP (formaldehyde) is 4.40 tpy, which is less than 10 tpy, therefore the stationary source is not a major source of HAP. HAP emissions are a subset of either VOC emissions or PM₁₀ emissions and are excluded from the assessable emissions total to avoid double counting.

BASIS FOR REQUIRING AN OPERATING PERMIT

In accordance with AS 46.14.130(b), an owner or operator of a Title V source² must obtain a Title V permit consistent with 40 CFR Part 71, as adopted by reference in 18 AAC 50.040.

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

- A major source;
- A stationary source, including an area source, subject to federal new source performance standards (NSPS) under Section 111 of the Clean Air Act or national emission standards for hazardous air pollutants (NESHAP) under Section 112 of the Clean Air Act; or
- Another stationary source designated by the Federal Administrator by regulation.

The Permittee is required to obtain an operating permit for the Eklutna Generation Station as specified under 18 AAC 50.326(a) and 40 CFR 71.3(a) because the stationary source is:

- A major source, as defined in Section 302 of the Clean Air Act that directly emits, or has the potential to emit, 100 tpy or more of any air pollutant subject to regulation;
- A source, including an area source, subject to a standard, limitation, or other requirement under Section 111 of the Act (NSPS) not exempted or deferred under AS 46.14.120(e) or (f); and
- A source, including an area source, subject to a standard or other requirement under Section 112 of the Act (NESHAP) not exempted or deferred under AS 46.14.120(e) or (f).

AIR QUALITY PERMITS

Permits-to-Operate

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

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)].

Title I (Construction and Minor) Permits

AQ1086MSS01: The Department issued Minor Permit AQ1086MSS01 to this stationary source on June 17, 2011. The project was classified under 18 AAC 50.502(c)(1) and 18 AAC 50.508(5). The permit established owner requested limits to avoid classification as a PSD major stationary source for NO_x and CO.

AQ1086MSS02: The Department issued Minor Permit AQ1086MSS02 to this stationary source on December 31, 2013. The permit revised the emissions unit inventory and established additional owner requested limits. This permit rescinded and replaced Minor Permit AQ1086MSS01.

AQ1086MSS03: The Department issued Minor Permit AQ1086MSS03 to this stationary source on November 6, 2015. The permit rescinded and replaced Minor Permit AQ1086MSS02 while carrying forward the revised and applicable conditions.

- Revision No. 1. The Permittee requested revisions to Minor Permit AQ1086MSS03 on April 30, 2025. These revisions included changing the operational hour limit to a 220 ton per 12-month rolling period emissions limit for NO_x and PM₁₀ and allowing changes to the reagent and/or reagent rate of injection for the SCR emissions control system. The permit also includes a new requirement to operate and maintain the ROM catalyst to control ammonia slip from the SCR system. Additionally, the permit requires the establishment of operating parameters to be monitored continuously while operating on ULSD that include the ammonia injection rate if NSPS Subpart IIII is triggered. The Department issued Minor Permit AQ1086MSS03 Revision No. 1 on March 13, 2026.

Title V Operating Permit Application, Revisions and Renewal History

AQ1086TVP01: The owner or operator submitted an application for an initial Title V operating permit on October 28, 2015. The application was amended on April 5, 2016 because the federal requirements applicable to EU IDs 13 and 14 were inaccurate. Both EUs meet the definition of gas-fired boiler in 40 CFR 63.11237 and are therefore not subject to 40 CFR 63 Subpart JJJJJ. This permit expired on January 27, 2022.

AQ1086TVP02: The Permittee submitted an application for a renewal to the Title V Permit No. AQ1086TVP01 on December 14, 2020. The Department issued Permit No. AQ1086TVP02 on February 2, 2022.

- Revision No. 1. The Permittee requested revisions to Title V Permit No. AQ1086TVP02 on April 30, 2025. This revision incorporated the changes made in Minor Permit AQ1086MSS03 Revision 1, added language to account for the potential for EU IDs 1 through 10 to be subject to 40 CFR 60 Subpart IIII, and added new Condition 32 for Chemical Accident Protection Provisions. The Department also added and/or revised the language of Conditions 41, 66, 68, 70, 71.2, 74, and 75. The Department issued Title V Permit No. AQ1086TVP02 Revision No. 1 on Permit Issuance Date.

COMPLIANCE HISTORY

The stationary source has operated at its current location since 2014 and has generally been in compliance with active Title I permits and Operating Permit AQ1086TVP01. However, in the full compliance evaluation (FCE) dated December 22, 2017 and September 11, 2019, MEA was found to be out of compliance with Conditions 15 and 72 of Operating Permit AQ1086TVP01. MEA corrected the non-compliance by repairing the ammonia dosing unit control system. Subsequent FCEs dated September 29, 2023 and January 10, 2025 have had violations including for failing to maintain the SCR reagent above the minimal flowrate required in the permit. MEA has made corrections and trained staff to ensure future compliance with these conditions. All but one set of facility operating reports and annual compliance certification reports between 2017 and 2025 were in compliance with permit requirements.

APPLICABLE REQUIREMENTS FROM PRECONSTRUCTION PERMITS

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

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

- 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 AQ1086TVP02.

Table 2 below lists the requirements carried into Operating Permit AQ1086TVP02 to ensure compliance with the preconstruction permit requirements.

Table 2 - Comparison of Minor Permit AQ1086MSS03 Revision 1 Conditions to Operating Permit AQ1086TVP02 Revision 1 Conditions

Permit AQ1086MSS03 Revision 1 Condition No.	Description of Requirement	Permit AQ1086TVP02 Revision 1 Condition No.	How Condition was Revised
Section 1	Emissions unit inventory	Section 2	Not revised.
6	PSD avoidance – NO _x and PM ₁₀ emission limits for EU IDs 1 through 10	13	Title V permit contains cross references to specific conditions for operating reports (64) and excess emissions and permit deviations (63).

Permit AQ1086MSS03 Revision 1 Condition No.	Description of Requirement	Permit AQ1086TVP02 Revision 1 Condition No.	How Condition was Revised
7	PSD avoidance – operating hour limit for EU ID 11	14	Title V permit contains cross references to specific conditions for operating reports (64) and excess emissions and permit deviations (63).
8	PSD avoidance – operating hour limit for EU IDs 13 & 14	15	Title V permit contains cross references to specific conditions for operating reports (64) and excess emissions and permit deviations (63).
9	PSD avoidance – control equipment requirements	16	Title V permit contains cross references to specific NSPS Subpart IIII conditions for applicability and parameter monitoring requirements (28 and 28.6.b) and excess emissions and permit deviations (63).
10	HAP major avoidance – formaldehyde emission limit for EU IDs 1 through 10	17	Not revised.
11	NO ₂ Ambient Air Provisions	18	Not revised.
12	NO ₂ & PM ₁₀ Ambient Air Provisions	19	Title V permit contains cross references to specific conditions for operating reports (64) and excess emissions and permit deviations (63).
13	18 AAC 50.502(c)(1)(C) avoidance – fuel sulfur requirements	12	Not revised.

Notes:

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

NON-APPLICABLE REQUIREMENTS

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

- **40 CFR 64 – Compliance Assurance Monitoring (CAM)**
 - EU IDs 1 through 10 are required to have SCR/CatOx controls installed for NO_x, CO, and VOC emissions. Operating parameters of the controls are monitored continuously, therefore CAM requirements are not applicable at this time. However, CAM requirements will apply to EU IDs 1 through 10 if NSPS Subpart IIII is triggered under Condition 28, at which point a CAM plan would be included in a subsequent operating permit.
 - Other than EU IDs 1 through 10, emissions units at the stationary source do not use control devices to achieve compliance with any emission limit or standard so CAM requirements are not applicable.

STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The Department adopted regulations from 40 CFR 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 CFR 70. This Statement of Basis, required under 40 CFR 71.11(b), provides the legal and factual basis for each condition of Operating Permit AQ1086TVP02. Additionally, and as required by 40 CFR 71.6(a)(1)(i), the state and federal regulations for each permit condition are cited in the permit.

Conditions 1 through 4 and 9, Visible Emissions Standard and MR&R

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

- 18 AAC 50.055(a) applies to the operation of fuel-burning equipment and industrial processes. EU IDs 1 through 14, 17, and 18 are fuel-burning equipment.

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

Factual Basis: Condition 1 prohibits the Permittee from causing or allowing visible emissions in excess of the applicable standard in 18 AAC 50.055(a)(1). MR&R requirements are listed in Conditions 2 through 4 (liquid fuel-burning equipment) and Condition 9 (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 Department has modified these conditions as follows:

- Added the word ‘exclusively’ when referencing ULSD because EU IDs 1 through 10 use a small amount of diesel when operating on gas.

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

Except for gas fuel-burning equipment, the Permittee must establish by visual observations of the emissions unit exhaust, which may be supplemented by other means (e.g., a defined stationary source operation and maintenance program), that the stationary source is in continuous compliance with the state emission standards for visible emissions.

These conditions detail a stepwise process for monitoring compliance with the state 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 EUs 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 visible emissions for gas fuel-burning EUs is waived, i.e., no Method 9 or smoke/no smoke observations will be required. The Department has found that natural gas fuel-burning equipment inherently has negligible visible emissions. However, the Department can request a source test for PM emissions from any smoking equipment.

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

Liquid Fuel-Fired Burning Equipment:

Monitoring – The emissions unit exhaust must be observed by either Method 9 or the Smoke/No Smoke Plan 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.

EU ID 11 does not qualify as insignificant per 18 AAC 50.326(d)(1) because it is subject to operational limits established in a Title I permit and standards established under NSPS Subpart IIII but has emissions below the significant emissions thresholds in 18 AAC 50.326(e). Therefore, the Department has waived VE monitoring and EU ID 11 is only subject to compliance certification requirements in accordance with Department Policy and Procedure No. 04.02.103, Topic #3, dated June 21, 2012.

EU IDs 12 and 18 are insignificant based on actual emissions. As long as actual emissions are below the significant emissions thresholds in 18 AAC 50.326(e),³ VE monitoring is waived and EU IDs 12 and 18 are only subject to compliance certification requirements in accordance with Department Policy and Procedure No. 04.02.103, Topic #3, dated June 21, 2012. The Permittee must annually certify compliance under Condition 65 with the visible emissions standard based on reasonable inquiry.

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

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

Dual Fuel-Burning Equipment:

For EU IDs 1 through 10, 13, and 14, when not operating exclusively on diesel, monitoring consists of a statement in each operating report that the emissions units fired gas as the primary fuel during the period covered by the report. When any of these emissions units operates exclusively on ULSD for more than 400 hours in a calendar year, monitoring as detailed in Condition 9 is required for that emissions unit in accordance with Department

³ Annual operation equal to or greater than 234 hours for each of EU IDs 12 and 18 is equivalent to the worst-case significant emissions threshold.

Policy and Procedure No. 04.02.103, Topic # 2, dated June 21, 2012. When any of these units operates exclusively on ULSD for less than 400 hours in a calendar year, monitoring for that 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.

Conditions 5 through 9, Particulate Matter (PM) Standard and MR&R

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

- 18 AAC 50.055(b)(1) applies to the operation of fuel-burning equipment and industrial processes. EU IDs 1 through 14, 17, and 18 are fuel-burning equipment.

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

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

- Added the word ‘exclusively’ when referencing ULSD because EU IDs 1 through 10 use a small amount of diesel when operating on gas.
- SPC IX for Dual Fuel-Burning Equipment points to the MR&R for Liquid Fuel-Burning Boilers and Heaters. However, because this stationary source has no boilers or heaters that burn liquid fuel exclusively, the MR&R for boilers and heaters in SPC IX is included under Condition 9.3.a.

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

Except for gas fuel-burning equipment, the Permittee must establish by visual observations which can be supplemented by other means (e.g., a defined operation and maintenance program) that the stationary source is in continuous compliance with the state emission standards for particulate matter.

Gas Fuel-Burning Equipment:

Monitoring – The monitoring of gas fuel-burning 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 PM emissions. However, the Department can request a source test for PM emissions from any smoking equipment.

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

Liquid Fuel-Burning Equipment:

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

The results of the correlation study predict that a 20 percent 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 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 its limitations – exceed the thresholds, the Permittee must either take corrective action or conduct a PM source test. The compliance conditions for PM do not draw a legal conclusion about whether the method shows compliance with the visible emissions standard.

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

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

Dual Fuel-Burning Equipment:

For EU IDs 1 through 10, 13, and 14, when not operating exclusively on diesel, monitoring consists of a statement in each operating report that the emissions units fired gas as the primary fuel during the period covered by the report. When any of these emissions units operates exclusively on ULSD for more than 400 hours in a calendar year, monitoring as detailed in Condition 9 is required for that emissions unit in accordance with Department Policy and Procedure No. 04.02.103, Topic # 2, dated June 21, 2012. When any of these emissions units operates exclusively on ULSD for 400 hours or less in a calendar year, monitoring for that source 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.

Condition 10, Sulfur Compound Emissions Standard and MR&R

Legal Basis: This condition requires compliance with the sulfur compound emission 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 1 through 14, 17, and 18 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 CFR 71.6(a)(3) and 71.6(c)(1).

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

The Permittee must comply with the sulfur content limits and MR&R requirements in Condition 12, which is from Minor Permit AQ1086MSS03 Revision 1 and includes requirements for liquid and gaseous fuels. Compliance with the fuel sulfur limits of Condition 12 will ensure compliance with the 500-ppm SO₂ emission limit of Condition 10. The Department concludes that the condition as modified meets the requirements of 40 CFR 71.6(a)(3) and intent of SPC XI MR&R.

Conditions 12 through 19, Preconstruction Permit Requirements

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

Factual Basis: Condition 12 incorporates a fuel sulfur limit in Minor Permit AQ1086MSS03 Revision 1 to avoid minor permitting under 18 AAC 50.502(c)(1)(C). Specifically, the requirement to limit the sulfur content of diesel fuel to no greater than 15 ppmw. It also limits the sulfur content of the natural gas burned to no more than 20 ppmv H₂S. The permit incorporates associated monitoring, recordkeeping, and reporting requirements.

Conditions 13 through 16 incorporate owner requested limits in Minor Permit AQ1086MSS03 Revision 1 to avoid classification as a PSD major source. Specifically, Condition 13 is applicable to EU IDs 1 through 10 and limits combined emissions of NO_x and PM₁₀ to no more than 220 tpy per rolling 12-month period, for each pollutant. Condition 14 is applicable to EU ID 11 and limits the total hours of operation to no more than 500 hours per year. Condition 15 is applicable to EU IDs 13 and 14 and limits the combined hours of operation to no more than 1,000 hours per rolling 12-month period. Condition 16 is applicable to EU IDs 1 through 10 and requires the Permittee to operate and maintain SCR, ROM catalyst, and CatOx control equipment downstream of each engine. Conditions 16.1 through 16.5 incorporates associated monitoring, recordkeeping, and reporting requirements.

Condition 17 incorporates a formaldehyde limit in AQ1086MSS03 Revision 1 to avoid classification as a HAP major source. The condition is applicable to EU IDs 1 through 10 and requires the operation of the SCR/CatOx control equipment described in Condition 16, which also contains monitoring, recordkeeping, and reporting requirements.

Conditions 18 and 19 incorporate ambient air quality protection provisions in AQ1086MSS03 Revision 1. Condition 18 specifies the stack configuration for all EUs listed in the permit, and requires a stack release height of 30 meters or more above grade for EU IDs 1 through 10. Condition 19 is applicable to EU IDs 12 and 18 and limits the combined hours of operation to 1,000 hours per rolling 12-month period. The permit incorporates associated monitoring, recordkeeping, and reporting requirements.

Condition 20, Insignificant Emissions Units

Legal Basis: The Permittee is required to meet state emission standards in 18 AAC 50.055 for all industrial processes and fuel-burning equipment regardless of size. 18 AAC 50.055 is contained in the federally approved SIP. The Department also added permit conditions for MR&R as required by 40 CFR 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 20.4.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 21 through 26, 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 CFR 71.2, which has been adopted by the Department under 18 AAC 50.040(j)(1).

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 13 and 14 are subject to NSPS Subpart Dc; EU IDs 11, 12, and 18 are subject to NSPS Subpart III, and it is possible that EU IDs 1 through 10 will become subject at a later date if diesel fuel consumption exceeds

the thresholds in Condition 28; and EU IDs 1 through 10 are subject to NSPS Subpart JJJJ. These units are therefore subject to Subpart A.

Conditions 21.1 through 21.3 – The Permittee is subject to these requirements in the event of a new NSPS affected facility⁴ or in the event of a modification or reconstruction of an existing facility⁵ into an affected facility.

Conditions 21.4 and 21.5 – The requirements to notify the EPA and the Department of the date of a continuous monitoring system (CMS) performance demonstration, no less than 30 days before demonstration commences (40 CFR 60.7(a)(5) & (6)), are applicable when a CMS is installed as an NSPS requirement.

Condition 21.6 – The requirements to notify the EPA and the Department of any proposed replacement of components of an existing facility (40 CFR 60.15) apply in the event that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility.

Condition 22 – The requirements in 40 CFR 60.7(b) to maintain start-up, shutdown, or malfunction records are applicable to all NSPS affected facilities subject to Subpart A.

Condition 23 – The Permittee is subject to these performance test 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 25 – The condition states that any credible evidence may be used to demonstrate compliance or establish violations of relevant NSPS standards.

Condition 26 – Concealment of emissions prohibitions in 40 CFR 60.12 are applicable to EU IDs 1 through 14 and 18.

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

Condition 27, NSPS Subpart Dc Requirements

Legal Basis: NSPS Subpart Dc applies to steam generating units for which construction, modification, or reconstruction commenced after June 9, 1989 and have maximum design heat input capacities of 29 MW (100 MMBtu/hr) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr). EU IDs 13 and 14 were constructed in June 2013, and have heat input capacities of 15.75 MMBtu/hr, and are therefore subject to Subpart Dc.

Factual Basis: The condition requires the Permittee to comply with the Subpart Dc fuel monitoring requirements. The Permittee submitted the initial notification for EU IDs 13 and 14 on January 27, 2016. EU IDs 13 and 14 are dual fuel-fired and have fuel sulfur content limits carried over from Minor Permit AQ1086MSS03 Revision 1. Compliance with the limits in Condition 12 will ensure compliance with the NSPS Subpart Dc SO₂ limits. The

⁴ “Affected facility” means, with reference to a stationary source, any apparatus to which a standard applies, as defined in 40 CFR 60.2, effective 7/1/07.

⁵ “Existing facility” means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type, as defined in 40 CFR 60.2, effective 7/1/07.

more restrictive requirement of Condition 59 will ensure compliance with the records retention requirement. EU IDs 13 and 14 are not subject to the PM standard in 40 CFR 60.43c because each unit's maximum design heat input is less than 30 MMBtu/hr.

Monitoring – The condition describes monitoring required in the event that the owner seeks to demonstrate compliance with the SO₂ standard based on fuel supplier certification under 40 CFR 60.46c(f).

Condition 28, NSPS Subpart III Requirements

Legal Basis: NSPS Subpart III applies to stationary compression ignition internal combustion engines (CI ICE) that commence construction, modification, or reconstruction after July 11, 2005 where the stationary CI ICE are manufactured after April 1, 2006 for non-fire pump engines and after July 1, 2006 for certified fire pump engines. EU IDs 11, 12, and 18 are emergency CI ICEs subject to the requirements of Subpart III per 40 CFR 60.4200(a)(2).

Factual Basis: These conditions incorporate the Subpart III emissions standards and associated MR&R applicable to emergency stationary CI ICE with a rating less than 2,237 kW (3,000 hp) and a displacement less than 10 liters per cylinder. The Permittee may not cause or allow EU IDs 11, 12, and 18 to violate these standards. The Permittee has demonstrated compliance with the emission standards by purchasing certified engines. These conditions also contain MR&R required in NSPS Subpart III. The Permittee is required to operate and maintain the stationary CI ICE according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. The Permittee is not required to submit an initial notification per 40 CFR 60.4214(b). Conditions 28.15.c and 28.15.d are added to fill gaps in reporting requirements under this Subpart.

If any of EU IDs 1 through 10 use an annual average ratio of greater than or equal to 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis, it will be subject to the requirements of NSPS Subpart III for CI ICE in this condition for the subsequent year. During this period, compliance with the requirements of NSPS Subpart JJJJ in Condition 29 will not be required for that unit. The Department has included the appropriate requirements from NSPS Subpart III for EU IDs 1 through 10 in Condition 28, in the event that the EUs go above this threshold and the subpart is triggered.

Condition 29, NSPS Subpart JJJJ Requirements

Legal Basis: NSPS Subpart JJJJ applies to stationary spark ignition (SI) ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured on or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 hp. EU IDs 1 through 10 are dual fuel Generator Engines, each rated at 1.71 MW (2,293 hp), constructed in 2012 and are subject to the requirements of Subpart JJJJ per 40 CFR 60.4230(a)(4)(i).

Factual Basis: These conditions incorporate the Subpart JJJJ emissions standards applicable to EU IDs 1 through 10. The dual fuel generator engines are spark ignition, non-emergency, and each rated at 1.71 MW (2,293 hp). The generator engines must meet the federal emission standards in Table 1 of Subpart JJJJ. The emissions standards for these generator engines are listed below:

- NO_x - 1.0 grams per horsepower hour (g/hp-hr),
- CO - 2.0 g/hp-hr, and
- VOC - 0.7 g/hp-hr

The Permittee may not cause or allow EU IDs 1 through 10 to violate these standards. These conditions also provide MR&R specifically required by the Subpart. The Permittee is required to conduct a performance test every 8,760 hours⁶ or 3 years, whichever comes first, thereafter to demonstrate compliance with the emission standards according to the requirements specified in 40 CFR 60.4244, Table 2 to Subpart JJJJ. The Permittee received a 40 CFR 60 Subpart JJJJ Performance Test Waiver on March 12, 2018. The waiver allows the Permittee to test EU IDs 1 through 10 as specified in Condition 29.3.b. Condition 29.7 was added to fill a gap in reporting requirements.

If any of EU IDs 1 through 10 use an annual average ratio of greater than or equal to 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis, it will be subject to the requirements of NSPS Subpart IIII in Condition 28 for CI ICE for the subsequent year. During this period, compliance with the requirements of NSPS Subpart JJJJ in this condition will not be required for that unit.

Condition 30, NESHAP 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 a major or area source of HAP emissions, excluding stationary RICE units being tested at a stationary RICE test cell/stand. The Eklutna Generation Station is an area source of HAP emissions accessible by the Federal Aid Highway System (FAHS). EU IDs 1 through 12 and 18 are subject to the provisions of NESHAP Subpart ZZZZ under 40 CFR 63.6590(a)(2)(iii) for new RICE whose construction commenced on or after June 12, 2006.

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 1 through 12 and 18. The Eklutna Generation Station is an area source of HAP emissions that is subject to the provisions of 40 CFR 63.6590(a)(2)(iii) for new RICE whose construction commence on or after June 12, 2006. However, for EU IDs 1 through 10, per 40 CFR 63.6590(c), compliance with the requirements of Subpart ZZZZ for new stationary RICE is achieved by meeting the requirements of 40 CFR Subpart JJJJ (Condition 29) and no further requirements apply under NESHAP Subparts A and ZZZZ. Additionally, for EU IDs 11, 12, and 18, and EU IDs 1 through 10 if triggered by Condition 28, per 40 CFR 63.6690(c), compliance with the requirements of Subpart ZZZZ is achieved by meeting the requirements of 40 CFR Subpart IIII (Condition 28) and no further requirements apply under NESHAP Subparts A and ZZZZ.

Condition 31, Asbestos NESHAP

Legal Basis: The requirements of 40 CFR 61 are applicable requirements for Title V permitting purposes, as stated in item 4 of the “applicable requirement” definition under

⁶ The federal rule says ‘8,760 hours’. The Department interprets this as ‘8,760 operating hours’.

40 CFR 71.2. The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 CFR 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 40 CFR 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.

Condition 32, Chemical Accident Prevention Provisions

Legal Basis: This condition applies because the Permittee has the potential to exceed a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115.

Factual Basis: If the Permittee changes to an aqueous ammonia concentration of 20 percent or greater and stores more than 20,000 pounds, it would be required to comply with the requirements of 40 CFR 68, including submitting compliance and risk management plans.

Conditions 33 through 35, Protection of Stratospheric Ozone, 40 CFR 82

Legal Basis: The requirements of 40 CFR 82 are applicable requirements for Title V permitting purposes, as stated in item 12 of the “applicable requirement” definition under 40 CFR 71.2.

Condition 33 requires compliance with the applicable requirements in 40 CFR 82, as adopted by reference under 18 AAC 50.040(d). The requirements apply if the Permittee engages in the recycling or disposal of certain refrigerants. The condition requires the Permittee to comply with the standards for recycling and emission reduction of refrigerants in 40 CFR 82, Subpart F.

Conditions 34 and 35 also require compliance with the applicable requirement adopted under 18 AAC 50.040(d). Condition 34 prohibitions apply to all stationary sources that use substitutes for ozone-depleting compounds. Condition 35 prohibitions apply to all stationary sources that use halon for extinguishing fires and inert gas to reduce explosion risk. These conditions prohibit the Permittee from causing or allowing violations of these requirements.

Factual Basis: These conditions incorporate applicable 40 CFR 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 ensure compliance with this federal regulation.

Condition 36, NESHAP Applicability Determination Requirements

Legal Basis: This condition requires the Permittee to determine NESHAP rule applicability 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 stationary source based on hazardous air pollutant (HAP) emissions. This condition requires the Permittee to notify the Department and Administrator if the stationary source becomes an affected source subject to a standard promulgated by EPA under 40 CFR Part 63, comply with any NESHAP standard that becomes applicable to the source by the compliance date established in the applicable subpart, and to keep records of applicability determinations and make those records available to the Department.

Conditions 37 through 39, Standard Terms and Conditions

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

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

Condition 40, Administration Fees

Legal Basis: This condition requires compliance with the requirements in 18 AAC 50.400 through 50.403. As stated in 18 AAC 50.326(j)(1), the provisions of 18 AAC 50.400 through 50.430 are applicable and 40 CFR 71.9 is not applicable.

Factual Basis: 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 through 50.403 specify the amount, payment period, and the frequency of fees applicable to a permit action.

Conditions 41 and 42, Emission Fees

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

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

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

This standard condition specifies that, unless otherwise approved by the Department, calculations of assessable emissions based on actual emissions must be for the most recent 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.

The Department has modified Condition 41 by deleting the phrase “in quantities 10 tons per year or greater” to match the revision made in 18 AAC 50.410 effective September 7, 2022. Beyond as noted, the Department has determined that the standard conditions adequately meet the requirements of 40 CFR 71.6(a)(3).

Condition 43, Good Air Pollution Control Practice

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

Factual Basis: The condition requires the Permittee to comply with good air pollution control practices 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 43.2 for units subject to good air pollution control practice need to be maintained for 5 years in accordance with Condition 59 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 44, 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 an applicable requirement, per 40 CFR 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 45, 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 an applicable requirement, per 40 CFR 71.2.

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

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

Condition 46, 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 CFR 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 CFR 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 to submit copies of these records upon request of the Department.

Condition 47, 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 63. Excess emission reporting under Condition 63 requires information on the steps taken to minimize emissions. Monitoring compliance for this condition consists of the report required under Condition 63.

Condition 48, 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 an applicable requirement per 40 CFR 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 48.1 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 65.

Condition 49, 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 50 through 52, Operating Conditions, Reference Test Methods, Excess Air Requirements

Legal Basis: Conditions 50 and 52 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 51 specifies source test methods, as required by 40 CFR 71.6(a)(3)(i) and 71.6(c)(1). These requirements apply because the Permittee is required by the permit to conduct source tests or a source test may be requested by the Department. The Permittee is required to conduct source tests in the manner set out in Conditions 50 through 52.

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

Condition 53, 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 54 through 57, Test Deadline Extension, Test Plans, Notifications and Reports

Legal Basis: Conditions 55 through 57 require compliance with the applicable requirements in 18 AAC 50.345(m) through (o), which are included in the SIP approved by EPA. Condition 54 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 50.345(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 58, 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 PM standards in 18 AAC 50.050 or 50.055.

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

Condition 59, Recordkeeping Requirements

Legal Basis: This condition requires the Permittee to keep records in accordance with 40 CFR 71.6(a)(3)(ii), which the Department adopted by reference under 18 AAC 50.040(j)(4). It also incorporates the general NSPS recordkeeping requirement under 40 CFR 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 CFR 60.7(f) requires records retention for at least two years of the measurements required to be maintained by this Part while 40 CFR 71.6(a)(3)(ii) requires at least five years of records retention. The five-year records retention requirement in Condition 59 satisfies both 40 CFR 60.7(f) and 40 CFR 71.6(a)(3)(ii).

Condition 60, 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 63 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 61, 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 62, 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 50.345(a). This condition requires the Permittee to submit information requested by the Department.

Condition 63 and Section 11, Excess Emission and Permit Deviation Reports and Notification Form

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

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

Except as noted in the last paragraph, the Department used the language in SPCs III and IV, adopted by reference under 18 AAC 50.346(b)(2), for the permit condition. The Department used the notification form in SPC IV adopted by reference under 18 AAC 50.346(b)(3), for the notification requirements (see Section 11).

The Department has modified Condition 63.3 and the Notification Form in Section 11 to reflect the electronic submittal requirements in 18 AAC 50.270 using the Department’s online form to submit notification of excess emissions and permit deviations beginning September 7, 2023. The electronic notification form is found at the Division of Air Quality’s Air Online Services (AOS) system webpage <http://dec.alaska.gov/applications/air/airtoolsweb> using the Permittee Portal option. Submittal through other methods may be allowed only upon written Department approval. Beyond as noted, the Department has determined that the standard conditions adequately meet the requirements of 40 CFR 71.6(a)(3).

Condition 64, Operating Reports

Legal Basis: The condition specifies reporting requirements as required by 40 CFR 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 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 65, Annual Compliance Certification

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

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

Condition 65.2 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.

Condition 66, Regional Haze Visibility Protection Area

Legal Basis: Condition 66 contains requirements from 18 AAC 50.265(1) for stationary sources located in the Regional Haze Visibility Protection Area (RHVPA), as specified in 18 AAC 50.025(a)(4), which is shown in Figure III.K.13 H-1 of the July 5, 2022 Amendments to: State Air Quality Control Plan (Regional Haze SIP)⁷ and adopted by reference in 18 AAC 50.030. To assist the state's efforts in meeting the requirements in 40 CFR 51.308(f)(2), the RHVPA was established with the intent to track and control current and potential new sources that may affect visibility in the Class I areas.

Factual Basis: 18 AAC 50.265 was added to the Department's regulations on August 21, 2022 to satisfy requirements from Section III.K.13.H Long-Term Strategy for Regional Haze, Subsection 2B.⁷ Condition 66.1 contains the requirements from 18 AAC 50.265(1)

⁷ The July 5, 2022 Amendments to: State Air Quality Control Plan for the Regional Haze SIP can be found at the following website: <https://dec.alaska.gov/media/25964/section-iii-k-13-second-implementation-period-combined-sip-section-adopted-07-05-22.pdf>.

which requires Permittee's to maintain onsite for 10 years, records of any maintenance to any significant emissions unit that has or may have an effect on any emission that affects visibility of Class I areas.

Condition 67, Emission Inventory Reporting

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

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

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

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

To ensure that the Department's electronic system reports complete information to the National Emissions Inventory, stationary sources with air quality permits are required to submit with each report emissions data described in 40 CFR 51.15 and the data elements in Tables 2a and 2b to Appendix A of 40 CFR 51 Subpart A, as applicable. Title V stationary sources with potential annual emissions greater than or equal to any of the emission thresholds shown in Condition 67.1 for Type A (large) sources, as listed in Table 1 to Appendix A of 40 CFR 51 Subpart A, are required to report emission inventory data every year for the previous calendar year (also known as the inventory year). For triennial inventory years, Type A sources only need to submit one report, not both an annual report and a separate triennial report.

Stationary sources, excluding owner requested limits (ORLs) issued under 18 AAC 50.225 and preapproved emission limits (PAELs) issued under 18 AAC 50.230, that do not meet any of the emission thresholds in Condition 67.1 for Type A (large) sources are required to report emission inventory data every third year (i.e., triennially) for the previous inventory

year under Condition 67.2. As of the issue date of this permit, the Eklutna Generation Station is required to report under Condition 67.2.

Condition 68, Consistency of Reporting Methodologies

Legal Basis: Condition 68 is from 18 AAC 50.275(a) and requires all stationary sources, regardless of permit classification (with the exception of ORLs issued under 18 AAC 50.225 and PAELs issued under 18 AAC 50.230), to report actual emissions to the state so that the state can meet its obligation under 40 CFR 51. Condition 68.1 is from 18 AAC 50.275(b) and requires consistency on the stationary sources' actual emissions reports submitted for NEI and the state's assessable emissions.

Factual Basis: The regulation was added to 18 AAC 50 on September 7, 2022 so as to include all stationary sources required to report actual emissions for the purpose of federal emissions inventory and to avoid inconsistencies in actual emissions reports submitted. When reporting actual emissions under Condition 66 or assessable emissions under Condition 41.2, consistent emission factors and calculation methods shall be used for all reporting requirements for the stationary source.

Condition 69, NSPS and NESHAP Reports and Waivers

Legal Basis: The Permittee is required to provide the Department a copy of each report submitted to EPA as required for emissions units subject to NSPS or NESHAP federal regulations under 18 AAC 50.326(j)(4). Appendix A to 40 CFR 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 CFR 60, 40 CFR 61, and 40 CFR 63. The reports themselves provide monitoring for compliance with this condition. For those notices and reports submitted through EPA's online reporting system, CDX-CEDRI, the Permittee is not required to submit a duplicate copy to the Department; a statement about the online submittal in the operating report would suffice.

Condition 70, Federal Electronic Reporting Allowance

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

Factual Basis: The electronic reporting provisions in Condition 70 is a general advisory option for stationary sources subject to federal rules to facilitate and streamline reporting requirements, in lieu of paper or email format. CROMERR establishes electronic reporting as an acceptable regulatory alternative to paper reporting and establishes requirements to assure that electronic documents are as legally dependable as their paper counterparts. The submittals must be in acceptable digital formats. *Acceptable digital formats* are file types that are compatible with CEDRI or other EPA electronic document receiving system that the Administrator may designate.

Condition 71, Permit Applications and Submittals

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

Factual Basis: The Department used the language in SPC XIV, adopted by reference under 18 AAC 50.346(b)(7), for the permit condition. The condition directs the applicant to send a copy of each application for modification or renewal of this permit to the EPA. Condition 71.2 lists the methods, in EPA’s preferred order, to which the applicant may submit the application documents, as specified in the EPA’s February 12, 2024, memorandum guidance for Submitting Air Permits to EPA Region 10. This condition shifts the burden of compliance with 40 CFR 71.10(d)(1) from the Department to the Permittee as allowed under 40 CFR 71.10(d)(1).

Conditions 72 through 74, Permit Changes and Revisions Requirements

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

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

The Permittee did not request trading of emission increases and decreases as described in 40 CFR 71.6(a)(13)(iii), therefore language addressing these provisions has not been included in this permit as part of Condition 72.

Condition 75, Permit Renewal

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

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

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

Conditions 76 through 80, General Compliance Requirements

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

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

Permit Shields Denied

There are no permit shields in place for the Eklutna Generation Station with the issuance of Permit No. AQ1086TVP02 Revision 1. The following table shows the requests that were denied in previous Title V permit applications and the reasons for the denial. The Department based the determinations on the permit application, likelihood for the source to become subject during the life of the permit, Title I permits and inspection reports.

Table 3 - Permit Shields Denied

Shield Requested for:	Reason for Shield Request:	Reason for Denial
40 CFR 60 Subpart Da	EUs 13 & 14 have heat inputs less than 250 MMBtu/hr and are therefore exempt per 40 CFR 60.40Da(e)(1).	These requirements are not potentially applicable and therefore a permit shield is not relevant.
40 CFR 60 Subpart Db	EUs 13 & 14 have a heat input less than 100 MMBtu/hr and are therefore exempt per 40 CFR 60.40b(a).	
40 CFR 63 Subpart JJJJJ	EUs 13 & 14 meet the definition of gas fired boiler are therefore exempt under 40 CFR 63.11195(e)	These requirements are not potentially applicable and therefore a permit shield is not relevant.
40 CFR 63 Subpart DDDDD	EUs 13, 14, & 17 are not located at a major source of HAP and are therefore exempt per 40 CFR 63.7485.	These requirements are not potentially applicable to EUs 13, 14, & 17 and therefore a permit shield is not relevant.
40 CFR 60 Subpart K	Tanks, EUs 15 and 16, were constructed after the 1978 applicability date.	These requirements are not potentially applicable and therefore a permit shield is not relevant.
40 CFR 60 Subpart Ka	Tanks, EUs 15 and 16, were constructed after the 1984 applicability date.	
40 CFR 60 Subpart Kb	Tanks are exempt per 40 CFR 60.110b(b)	

Shield Requested for:	Reason for Shield Request:	Reason for Denial
40 CFR 60 Subparts C, Cb, Cc, Cd, Ce, D, Da, Db, E, Ea, Eb, Ec, F, G, Ga, H, I, J, Ja, K, Ka, Kb, L, M, N, Na, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AAa, BB, CC, DD, EE, HH, KK, LL, MM, NN, PP, QQ, RR, SS, TT, UU, VV, VVa, WW, XX, AAA, BBB, DDD, FFF, GGG, GGGa, HHH, III, JJJ, KKK, LLL, NNN, OOO, PPP, QQQ, RRR, SSS, TTT, UUU, VVV, WWW, AAAA, BBB, CCCC, DDD, EEEE, FFFF, KKKK, LLLL, MMMM, OOOO, QQQQ, TTTT, UUUU	Not an affected stationary source, operation, or industry.	These are not potentially applicable requirements and therefore a permit shield is not relevant.
40 CFR 63 Subpart B, F, G, H, I, J, L, M, N, O, Q, R, S, T, U, W, X, Y, AA, BB, CC, DD, EE, GG, HH, II, JJ, KK, LL, MM, OO, PP, QQ, RR, SS, TT, UU, VV, WW, XX, YY, CCC, DDD, EEE, GGG, HHH, III, JJJ, LLL, MMM, NNN, OOO, PPP, QQQ, RRR, TTT, UUU, VVV, XXX, AAAA, CCCC, DDDD, EEEE, FFFF, GGGG, HHHH, IIII, JJJJ, KKKK, MMMM, NNNN, OOOO, PPPP, QQQQ, RRRR, SSSS, TTTT, UUUU, VVVV, WWWW, XXXX, YYYY, AAAAA, BBBBB, CCCCC, DDDDD, EEEEE, FFFFF, GGGGG, HHHHH, IIII, JJJJ, KKKK, LLLLL, MMMMM, NNNNN, PPPPP, QQQQQ, RRRRR, SSSSS, TTTTT, UUUUU, VVVVV, WWWWW, XXXXX, YYYYY, ZZZZZ, BBBBBB, CCCCCC, DDDDDD, EEEEE, FFFFFFF, GGGGGG, HHHHHH, JJJJJ, LLLLLL, MMMMMM, NNNNNN, OOOOOO, PPPPPP, QQQQQQ, RRRRRR, SSSSSS, TTTTTT, VVVVVV, WWWWWW, XXXXXX, YYYYYY, ZZZZZZ, AAAAAAA, BBBBBBB, CCCCCC, DDDDDD, EEEEE, HHHHHH	Not an affected stationary source, operation, or industry.	These are not potentially applicable requirements and therefore a permit shield is not relevant.
40 CFR 61 Subpart M	No affected emission units within the stationary source.	The requirements in 40 CFR 61.145, 61.150, and 61.152 are generally applicable to all sources and the Department has decided to include them in operating permits.
40 CFR 61 Subpart A, B, C, D, E, F, H, I, J, K, L, M, N, O, P, Q, R, T, V, W, Y, BB, and FF	No affected emission units within the stationary source.	These are not potentially applicable requirements and therefore a permit shield is not relevant.
40 CFR 51.308(e) and 40 CFR 51 Appendix Y Guidelines for BART Determinations under the Regional Haze Rule	Stationary source is not an “existing stationary facility” as defined in 40 CFR 51.301.	These are not applicable requirements for Title V permits.

Shield Requested for:	Reason for Shield Request:	Reason for Denial
40 CFR 82 Subpart B	Stationary source and its employees do not perform service on motor vehicle air conditioners, for consideration or otherwise.	These are not potentially applicable requirements and therefore a permit shield is not relevant.
18 AAC 50.055(a)(2)-(a)(9)	The stationary source does not contain any EUs subject to these opacity standards.	These are not potentially applicable requirements and therefore a permit shield is not relevant.
18 AAC 50.055(b)(2)-(b)(6)	The stationary source does not contain any EUs subject to these particulate matter standards.	These are not potentially applicable requirements and therefore a permit shield is not relevant.
18 AAC 50.055(d)-(f)	The stationary source does not contain any EUs subject to these sulfur standards.	These are not potentially applicable requirements and therefore a permit shield is not relevant.
18 AAC 50.0060	The stationary source is not an affected source regulated by these standards.	18 AAC 50.060 was repealed 8/20/2016.
18 AAC 50.070, 50.075, 50.076, 50.077, 50.085, 50.090	The stationary source is not an affected source regulated by these standards.	These are not potentially applicable requirements and therefore a permit shield is not relevant.