

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

March 17, 2014

**Teck Alaska Incorporated
Red Dog Mine**

**STATEMENT OF BASIS
of the terms and conditions for
Permit No. AQ0290TVP02**

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INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. AQ0290TVP02.

STATIONARY SOURCE IDENTIFICATION

Section 1 of Operating Permit No. AQ0290TVP02 contains information on the stationary source as provided in the Title V permit application.

The stationary source is owned and operated by Teck Alaska Incorporated and Teck Alaska Incorporated is the Permittee for the stationary source's operating permit. The SIC code for this stationary source is 1031 - Lead and Zinc Ores.

The stationary source is engaged in zinc and lead mining activities from an open pit mine. Ore containing lead and zinc is milled to produce lead and zinc concentrate in a powder form. The stationary source consists of a quarry, an overburden stockpile, an ore crushing operation, an ore stockpile, a concentrating mill, a concentrate stockpile and a concrete truck loading facility. Support facilities include fuel storage tanks, a power generating system, a wastewater treatment facility, a service/office complex, a personnel accommodations complex (PAC), a construction camp, refuse incinerators, a concrete batch plant, a rock crusher, maintenance shops, an airport, the tailings pond and a storage yard.

EMISSION UNIT INVENTORY AND DESCRIPTION

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

The emission units at the Red Dog Mine that are classified and have specific monitoring, recordkeeping and reporting requirements are listed in Table A of Operating Permit No. AQ0290TVP02.

Table A of Operating Permit No. AQ0290TVP02 contains information on the emission units regulated by this permit as provided in the permit renewal application. The table is provided for informational and identification purposes only. Specifically, the emission source rating/size provided in the table does not create an enforceable limit.

EMISSIONS

A summary of the potential to emit (PTE)¹ and assessable PTE as indicated in the permit renewal application from the Red Dog Mine, and verified by the Department, is shown in the table below.

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

Pollutant	NO _x	CO	PM ₁₀	SO ₂	CO ₂ e ^{(c), (d)}	VOC ^(b)	HAPs ^{(a), (b)}	Total (excluding CO ₂ e)
PTE	4,176	402	366	265	145,634	162	230	5,601
Assessable PTE	4,176	402	366	265	145,634	162	230	5,601

Notes:

(a) The PTE of methanol is greater than 10 TPY and the PTE of total combined HAPs is greater than 25 TPY.

(b) HAP emissions are almost all VOCs. Therefore, the VOC column reflects only non-HAP VOCs. This separate listing of VOCs (i.e., HAP/non-HAP) otherwise avoids double counting VOC HAP emissions in the Total column.

(c) CO₂e or carbon dioxide equivalent emissions are defined as the sum of the mass emissions of each individual GHG adjusted for its global warming potential (GWP). Total GHG CO₂e calculations submitted by the Permittee on 03/29/2013; revised submission to include biogenic CO₂ emissions submitted 07/07/2013.

(d) Greenhouse gas (GHG) means the air pollutant defined in 40 C.F.R. 86.1818-12(a) as the aggregate group of six greenhouse gases: carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The stationary source emits or has the potential to emit CO₂, N₂O and CH₄ as GHG components.

The assessable PTE listed under Condition 75.1 is the sum of the emissions of each individual air pollutant, other than CO₂e, for which the stationary source has the potential to emit quantities greater than 10 TPY or greater than GHG permitting thresholds². The emissions listed in Table E are estimates to be used for informational purposes only. The listing of the emissions does not create an enforceable limit to the stationary source.

Potential criteria pollutants and HAPs emissions were based on Minor Permit AQ0290MSS07, approved on March 10, 2010. The PTE of criteria pollutants was based on emission calculations submitted by Teck Alaska Incorporated in their renewal application and updated from the TAR for permit AQ0290MSS07. Potential emissions were calculated using EPA's AP-42 emission factors, vendor data and mass balance. HAP emissions were calculated using EPA's AP-42 emission factors and vendor data.

The total combined PTE of HAPs for the Red Dog Mine is 230 TPY. The PTE of methanol from the quarry operations (EU ID MF-6) at the Red Dog Mine is 114 TPY. Based on these findings, the Red Dog Mine is a major source of HAP emissions since the calculated HAP emissions are greater than the triggers of 10/25 TPY.

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(23).

² See EPA's November 2010 PSD and Title V Permitting Guidance, Table V-A.

BASIS FOR REQUIRING AN OPERATING PERMIT

In accordance with AS 46.14.130(b), an owner or operator of a Title V source³ 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 stationary sources exempted or deferred by AS 46.14.120(e) or (f), AS 46.14.130(b) lists three categories of sources that require an operating permit:

- A major source;
- A stationary source subject to Federal new source performance standards under Section 111 of the Clean Air Act or national emission standards for hazardous air pollutants under Section 112 of the Clean Air Act; and
- Another stationary source designated by the Federal Administrator by regulation.

This stationary source requires an operating permit because it is classified under 18 AAC 50.326(a), 40 C.F.R. 71.3(a), and EPA's March 2011 *PSD and Title V Permitting Guidance for Greenhouse Gases* as:

- Belonging to a single major industrial grouping and that as defined in Section 112 of the Act, emits or has the potential to emit, in the aggregate, 10 TPY or more of any hazardous air pollutant (HAP), 25 TPY or more of any combination of such HAPs, or such lesser quantity as the Administrator may establish by rule;
- A major stationary source as defined in Section 302 of the Clean Air Act that directly emits, or has the potential to emit, 100 TPY or more of any air pollutant;
- Contains a source, including an existing or newly constructed GHG emission source, that emits or has a PTE equal to or greater than 100,000 TPY of CO_{2e} **and** 100 TPY GHGs on a mass basis.

AIR QUALITY PERMITS

Previous Air Quality Permit-to-Operate

On June 17, 1988, the Department authorized the Red Dog Mine Project construction under the State Air Quality Control Prevention of Significant Deterioration pre-construction review procedures and issued Permit to operate No. 8732-AA001. The decision authorized construction of an 806,000 ton per day lead and zinc mine, processing facility, power plant, personnel accommodation complex and other support facilities. The most recent permit issued for this stationary source is Permit-to-Operate number 9332-AA003, Amendment 2. This permit included all construction authorizations issued through October 26, 1994, and was issued before January 18, 1997 (the effective date of the divided Title I/Title V permitting program). All stationary source-specific requirements established in this previous permit are included in the new operating permit as described in Table I.

³ 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

The Department issued Construction Permit No. 9932-AC005, originally issued December 10, 1999 authorized the applicant to construct a production rate increase project, with ancillary changes to the processing plant and power plant. The Department reviewed this project under the State approved PSD program and imposed best available control technology on the new and modified equipment. Notwithstanding the Department's actions, U.S. EPA issued an order to the Department and applicant challenging the original decision under Part 168 of the Clean Air Act and prohibited construction until defects in the power plant modification BACT decisions were corrected. After the U.S. Supreme Court sided with U.S. EPA, Permit No. 9932-AC005 Revision 2 contains the corrected BACT consistent with federal guidelines.

On April 26, 2001, the Department issued Construction Permit No. 0032-AC018 which authorized the applicant to install a seventh 5MW diesel electric generator in a new power plant originally constructed for the production rate increase project, but with owner requested limits to avoid PSD review.

Construction Permit Nos. 0032-AC018 Rev. 1 and 9932-AC005 Rev. 2 were issued to this stationary source on November 26, 2002 and on July 16, 2003, respectively. The stationary source-specific requirements established in construction permit Nos. 0032-AC018 Revision 1 and 9932-AC005 Revision 2 are included in the operating permit renewal as described in Table G and Table H.

The Department issued Minor Permit No. AQ0290MSS01 to this stationary source on June 2, 2005 authorizing an airport paving project activities and equipment. The Permittee submitted a request to rescind AQ0290MSS01 on February 19, 2013. The on-site paving project was completed. All emission units authorized by AQ0290MSS01 (EU IDs 1 through 8) were removed from the Mine site. ADEC sent permit rescission letter on June 14, 2013.

The Department issued Minor Permit No. AQ0290MSS02 to this stationary source on October 4, 2005 authorizing the applicant to install a baghouse on the gyratory crusher and jaw crusher building. The Department established stationary source-specific requirements in this Title I permit included in the new operating permit as described in Table J.

The Department issued Minor Permit No. AQ0290MSS03 to this stationary source on August 3, 2006 authorizing installation of a baghouse on the coarse ore storage building. The Department established stationary source-specific requirements in this Title I permit included in the new operating permit as described in Table K.

The Department issued Minor Permit No. AQ0290MSS05 to this stationary source on June 9, 2005 to authorize relocation of a drill rig to conduct gas exploration through shale beds located near the Red Dog Mine site. The Permittee submitted a request to rescind AQ0290MSS05 on July 7, 2013. The Permittee stated that the activities related to the Shallow, Shale-Hosted Natural Gas Exploration project ended in August 2012. The exploration wells were cemented in and the equipment used was shipped offsite. The project was permanently closed. All emission units authorized by AQ0290MSS05 (EU IDs SG-1 through 17) were removed from the Mine site. ADEC sent permit rescission letter on August 2, 2013.

The Department issued Minor Permit No. AQ0290MSS06 to this stationary source on July 8, 2008 and issued Minor Permit No. AQ0290MSS06, Revision 1 Administrative Amendment to this stationary source on May 5, 2009. These actions authorized the applicant to relocate a portable rock crushing plant to the Red Dog Mine in support of construction and maintenance activities. The Department established stationary source-specific requirements in this Title I permit included in the new operating permit as described in Table L.

The Department issued Minor Permit No. AQ0290MSS07 to this stationary source on March 10, 2010 authorizing the applicant to install a tailings sump emergency generator at the Red Dog Mine tailings impoundment. The Department established stationary source-specific requirements in this Title I permit included in the new operating permit as described in Table M.

Title V Operating Permit Application, Revisions and Renewal History

The most recent operating permit issued for this stationary source is operating permit number AQ0290TVP01. This operating permit includes all construction authorizations issued through November 10, 2003. All stationary source-specific requirements established in this previous permit are included in the new operating permit.

The owner or operator submitted a renewal application on June 24, 2008. Additional information was received on September 29, 2008, August 19, 2009 (Electronic Emission Calculations), June 4, 2010 (NESHAP Subpart ZZZZ applicability), July 28, 2010 (permit renewal amendment related to NOx requirements related to Notice of Violation), May 17, 2011 (Boiler MACT applicability determination) and incorporated into the renewal permit, September 13, 2012 (change in Responsible Official) and March 27, 2013 (NSPS and NESHAP applicability update). The Department issued AQ0290TVP02 on March 17, 2014. The Permittee submitted a letter to the Department on May 1, 2015 requesting revisions to the operating permit. The Permittee submitted the same requests on July 13, 2015 using the required Title V application forms. The revisions are included in the operating permit as described in Table N.

COMPLIANCE HISTORY

The stationary source has operated at its current location since 1989. Review of the permit files for this stationary source, which includes the past inspection reports, indicate that the stationary source had been issued Notice of Violations. The violations were the result of the joint ADEC and EPA inspection in August 2000, where numerous violations on the air quality control permit conditions were noted. Subsequently, a settlement agreement was reached on December 17, 2001, which included both a large fine and Supplemental Environmental Projects (SEPs). An inspection conducted in August 2002 concluded that Teck Cominco had corrected all the alleged violations and had begun the SEPs.

Additional violations were identified by the Permittee in the Air Quality Full Compliance Evaluations reports for the period December 1, 2007 through December 15, 2009.

Additionally, a settlement agreement was reached on July 21, 2010, which included both a large fine and additional Supplemental Environmental Projects (SEPs). Teck Alaska Incorporated has completed the SEPs.

APPLICABLE REQUIREMENTS CARRIED FORWARD FROM PRE-CONSTRUCTION PERMITS

Incorporated by reference at 18 AAC 50.326(j), 40 C.F.R. Part 71.6 defines “applicable requirement” to include the terms and conditions of any pre-construction permit issued under rules approved in Alaska’s State Implementation Plan (SIP) and any pre-construction permits issued by the EPA.

Alaska’s SIP includes the following types of pre-construction permits:

- Permit-to-operate issued before January 18, 1997 (these permits cover both construction and operations);
- Construction Permits issued effective January 18, 1997 or later; and
- Minor permits issued effective October 1, 2004 or later.

Pre-construction permit terms and conditions include both source-specific conditions and conditions derived from regulatory applicable requirements such as standard permit conditions, generally applicable conditions and conditions that quote or paraphrase requirements in regulation.

These requirements include, but are not limited to, each emission unit- or source-specific requirement established in these permits issued under 18 AAC 50 that are still in effect at the time of this operating permit issuance. Table F, Table G, Table H, Table I, Table J, Table K, Table L, and Table M below respectively list the requirements carried over from Operating Permit No: AQ0290TVP01, Construction Permit No: 0032-AC018 Rev. 1, Construction Permit No: 9932-AC005 Rev. 2, and Minor Permit Nos. AQ0290MSS02, AQ0290MSS03, AQ0290MSS06 Revision 1, and AQ0290MSS07, into Operating Permit No: AQ0290TVP02 to ensure compliance with the applicable requirements.

Table F - Comparison of Previous Operating Permit No: AQ0290TVP01 Conditions to Operating Permit No: AQ0290TVP02 Conditions⁴

Permit No. AQ0290TVP01 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
Section 3	Emission unit inventory	Section 2	Updated the list based on new information in the renewal application. Also, clarifying Footnotes have been added to Table A relating to specific EU IDs.
3	VE SIP Requirements	1	Effective 9/13/07, the EPA approved certain changes to the SIP limits, including removal of the “more than 3 minutes in any one hour criterion”. The approval eliminated the need for the footnotes found in the permit in association with these conditions and allows the deletion of the “3-minute” criterion.

⁴ This table does not include all standard and general conditions.

Permit No. AQ0290TVP01 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
3 through 5	VE, PM, and Sulfur Compound Emissions SIP Requirements	1 through 15	Conditions were revised to the standard permit template conditions. Some emission units, which were previously considered insignificant emission units based on actual emissions, were added to these conditions because these units are subject to NSPS or NESHAP requirements and are therefore considered significant emission units.
6	Insignificant Emission Units Operating Limits	21	These units are restricted to fuel and emission limits for PSD avoidance (NOx and PM) per the SOB to AQ0290TVP01 as pertains to Condition 6. This condition is instead moved to Condition 21 (ORL section) in AQ0290TVP02.
13	Baghouse and Soil Remediation Unit PM Test (Monitoring) Requirement	14	Revised to also reflect the lower NSPS, Subpart LL opacity requirement (Condition 44.1b) applicable to EU IDs MD-1, MD-4, and MD-6 through MD-10. EU ID SRU-1 removed as equipment has been scrapped.
18	NOx BACT	25.1d	In accordance with Permit No. 9932-AC005 Rev. 2, Condition 20.2, AQ0290TVP01 Condition 18 is obsolete and replaced by Condition 25.1d in AQ0290TVP02.
19	Reference to “paved road” segments of the DeLong Mountain Regional Transportation System (DMTS)	19	The Permittee indicated that the trial project to pave selected sections of the DMTS road with “hi float” was unsuccessful since it was not sufficiently durable; and the Permittee does not plan to pave sections of the DMTS road. As such, reference to paved portion of the DMTS were removed from the permit.
20	Ambient Air Quality Protection (Non-road engine (EU ID MXG-100) operating restriction)	NA	The Permittee indicated in supplemental information provided on March 27, 2013 that EU ID MXG-100 was removed from the source upon approval to install EU ID MXG-101 under AQ0290MSS06 Rev.1. This condition is obsolete and not carried forward into AQ0290TVP02.
21	Stack Parameter Requirements	N/A	Requirements were not carried forward because they are already fulfilled as indicated by the Permittee in the renewal application.
22.2	NOx BACT – NOx Source Tests	20.1	Revised the initial (one-time) source test to a recurring source compliance test pursuant to 40 C.F.R. 71 (periodic demonstration of compliance)
22.4 & 22.5	PM BACT – PM Source Tests	20.3 & 20.4	Revised the initial (one-time) source test to a recurring source compliance test pursuant to 40 C.F.R. 71 (periodic demonstration of compliance)
28	CO PSD Avoidance	22.2	Added a CO recurring testing requirement pursuant to 40 C.F.R. 71 for periodic demonstration of compliance

Permit No. AQ0290TVP01 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
31	NO _x requirements	25	Added Conditions 25.4b and 25.5d(vi) during this review as proposed by the Permittee as directed by the settlement agreement for Notice of Violation No. 2009-1030-40-8188.
31	NO _x requirements	25	A footnote was attached to Condition 18 of AQ0290TVP01 that indicated authorization for EU ID MG-17 was in dispute with the EPA pending resolution of the Supreme Court of the United States Case. The Supreme Court decision was issued July 2003, siding with Circuit Court and EPA.
N/A	NO _x requirements	28	Condition 28 was carried forward from Minor Permit No. AQ0290MSS07, issued March 10, 2010. This condition requires the Permittee to limit operation of EU ID MG-26 to 500 hours per 12 consecutive month period and to monitor operating hours.
33-41	NSPS Subpart A	35 through 42	The Coarse Ore Storage Building Baghouse (EU ID MD-9) and Engine EU IDs MG-26) are now subject to NSPS Subparts LL and IIII, respectively, and thus are subject to NSPS Subpart A requirements.
42	NSPS Subpart Kb	N/A	The requirement for the Permittee to keep records showing the dimensions and capacity of EU IDs MT-1 through MT-4, as previously required under NSPS Subpart Kb, has not been included in the renewal permit because Subpart Kb no longer requires these records (Subpart Kb was revised by EPA on October 15, 2003). EU IDs MT-1 through MT-4 are storage vessels with a capacity greater than or equal to 151 m ³ storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa). Therefore, under 40 C.F.R. 60.110b(b), these units are not subject to the requirements of NSPS Subpart Kb.
43	NSPS Subpart LL	44	Added the Coarse Ore Storage Building Baghouse (EU ID MD-9) and Concentrate Storage Building Baghouse (EU ID MD-10) under Condition 44 because the requirements of NSPS Subpart LL apply to these emission units.
N/A	NSPS Subpart OOO	45 - 48	Added NSPS Subpart OOO requirements which apply to affected EU IDs PRC-1 through PRC-11.
N/A	NSPS Subpart IIII	49 through 50	Added applicable requirements of NSPS Subpart IIII for diesel generator EU ID MG-26.
N/A	NESHAP Subparts A and ZZZZ	53 through 57	Added applicable requirements of NESHAP Subparts A and ZZZZ for diesel generators.

Permit No. AQ0290TVP01 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
57	Good Air Pollution Control Practice	77	Condition was revised to the standard permit condition. Additionally, the condition was revised to specify which emission units are subject to this condition since some emission units are not required to comply with this condition and instead must comply with NSPS or NESHAP Good Air Pollution Control Practices requirements (after the compliance date).
N/A	Emissions Inventory Reporting	104	This new condition requires the Permittee to report actual emissions, by emission unit, of CO, NH ₃ , NO _x , PM ₁₀ , PM _{2.5} , SO ₂ , VOCs and Lead (Pb) (and lead compounds) using the form in Section 16 of this permit.

Table G - Comparison of Previous Construction Permit No: 0032-AC018 Rev. 1 Conditions to Operating Permit No: AQ0290TVP02 Conditions⁵

Permit No. 0032-AC018 Rev. 1 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
14	Ambient Air Quality Protection (Non-road engine (EU ID MXG-100) operating restriction)	NA	The Permittee indicated in supplemental information provided on March 27, 2013 that EU ID MXG-100 was removed from the source upon approval to install EU ID MXG-101 under AQ0290MSS06 Rev.1. This condition is obsolete and not carried into AQ0290TVP02.
15	Stack Parameter Requirements	N/A	Requirements were not carried forward because they are already fulfilled as indicated by the Permittee in the renewal application.
20.1a	VE SIP Requirement	N/A	The VE standard was not carried forward because effective 9/13/07, the EPA approved certain changes to the SIP limits, including removal of the "more than 3 minutes in any one hour criterion".

⁵ This table does not include all standard and general conditions.

Table H - Comparison of Previous Construction Permit No: 9932-AC005 Rev. 2 Conditions to Operating Permit No: AQ0290TVP02 Conditions⁶

Permit No. 9932-AC005 Rev 2 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
Section 10	Emission unit inventory	Section 2	Updated the list based on new information from construction permits Nos. 0032-AC018 Rev. 1 & 9932-AC005 Rev. 2 and 9/3/03 Letter Request for Administrative Revision on EU ID MG-11 and the renewal application.
10 & Section 15	Public Access Control Plan	Section 4	Similar requirements. Removed obsolete requirements.
11 & 12	No modifications without notification	None	Similar requirements already incorporated in Condition 82.
13 & 18	SO ₂ requirements: Fuel sulfur limits & MR&R	15, 17, & 23	Same limits and requirements. Added EU ID MG-26 to Condition 15 (sulfur compound emissions).
14, 19, & 20	NO _x requirements	25	Adopted the combined NO _x limit for EU IDs MG-1 through MG-6, MG-17 (with and without SCR) and MG-18. Added Conditions 25.4b and 25.5d(vi) during this review as proposed by the Permittee as directed by the settlement agreement for Notice of Violation No. 2009-1030-40-8188. Rescinded the NO _x source test requirements for EU ID MG-18 (already fulfilled). Rescinded the NO _x emission limits of Conditions 14 and 19, which were replaced by Condition 21 at a period 12-months after the startup of EU ID MG-17, per Permit 9932-AC005 Rev. 2.
15	Fugitive particulate matter requirements	19	Similar requirements. However, references to DMTS paved roads and the Asphalt plant have been removed as the DMTS does not have paved roads and the Asphalt plant, which was temporary, has been removed from this source.
17	ORL to avoid PSD for Carbon Monoxide for EU IDs MG-1 through MG-6, MG-17 and MG-18	22	Similar limits and requirements, except included a recurring CO source test requirement for demonstration of periodic compliance under 40 C.F.R. 71.
21	ORL to avoid PSD for Particulate Matter for EU IDs MG-1 through MG-6 and MG-18	26	Similar limit and requirements, except rescinded Condition 19.4 of Construction Permit No. 0032-AC018 Rev. 1 requiring source test for EU ID MG-18 (requirement already fulfilled); and included a recurring PM source test requirement for demonstration of periodic compliance under 40 C.F.R. 71.

⁶ This table does not include all standard and general conditions.

Permit No. 9932-AC005 Rev 2 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
22	NO _x BACT limits, source tests and reporting requirements	20.1, 20.2, & Table B	Initial NO _x source tests requirement already fulfilled for these sources. The construction commencement notification requirement for EU ID MG-17 is rescinded; already fulfilled. Included recurring NO _x source test requirement for demonstration of periodic compliance under 40 C.F.R. 71.
23	VE and PM BACT limits and source tests and reporting requirements	20.3 through 20.6, & Table B	Did not include PM source test requirement for EU IDs MG-11 through MG-16, MG-19, through MG-21, MI-3, MD-1 through MD-4, MD-6, MF-2, MF-3, and MF-4 because these initial test requirements were already fulfilled. Included recurring VE and PM source test requirements for demonstration of periodic compliance under 40 C.F.R. 71. Did not include PM requirements for the Rock Crusher (EU ID MF-12) in AQ0290TVP02, or specifically under Condition 20, because the emission unit is covered under a separate General Permit No. 9.
Section 6	NSPS requirements	Section 5	Similar requirements; different format. Removed NSPS Subpart OOO requirements; this applies to EU IDs MF-11 and MF-12, which are not covered under this permit.
30 & 31	SIP emission standards (VE, PM & SO ₂) and MR&R	1 through 15 & Section 3	Incorporated standard permit condition language. Removed PM source testing required for EU IDs MG-1 through MG-6 and VE surveillance for EU IDs MG-19, MG-20, & MG-21; requirements already fulfilled. Added EU ID MG-26 to Condition 15 (sulfur compound emissions).
32	Bulk material handling	79	Carried forward emission unit-specific requirements. Incorporated standard permit condition language.
35	Air pollution prohibited	81	Carried forward emission unit-specific requirements. Incorporated standard permit condition language.
33	Open burning	84	Carried forward emission unit-specific requirements.
37	Air Pollution Control Practice	77	Carried forward emission unit-specific requirements. Incorporated standard permit condition language.
38	Construction or modification	82	Similar requirements.
39.6	Source testing for emissions of ammonia	80	Similar requirements.
50.2	Recordkeeping requirements for NSPS sources	96.2	Removed recordkeeping requirements pertaining to 40 C.F.R. 61, Subparts A & E in Construction Permit No. 9932-AC005 Rev. 2. (No emission units under this permit regulated by 40 C.F.R. 61).

Permit No. 9932-AC005 Rev 2 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
52	BACT reanalysis	None	Permit application indicates construction completed 1-year prior to June 2008 application date. Condition sunsetted and not carried forward into AQ0290TVP02.

Table I - Comparison of Previous Permit-to-Operate No. 9932-AA003, Rev 2 Conditions to Operating Permit No: AQ0290TVP02 Conditions⁷

Permit No. 9932-AA003 Rev 2 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
Exhibit A	Emission Unit Inventory	Section 2	Updated the list based on new information from most recent construction permits, Nos. 0032 AC018 Rev. 1 & 9932-AC005 Rev. 2 and the renewal application.
1	Notification requirement for new sources	None	Similar requirements already incorporated in Condition 82.
2	If on-site construction has not begun within 18 months of the issuance date of this permit...	None	Not carried forward. Requirement already fulfilled for the emission units covered by this condition.
3 and Exhibit B	Permittee shall comply with the State Ambient Air Quality Standards and increments established in Exhibit B (Operational Limitations)	1 - 15, 17 & 20	These limitations have been carried forward in the operating permit conditions based on the applicable current SIP standards and construction permit Nos. 0032-AC018 Rev. 1, 11/26/02 and 9932-AC005 Rev. 2, 7/16/03.
4 & 5	Permittee shall maintain and operate, in accordance with ... to provide optimum control of air contaminant emissions and to meet PM limits...	77	Replaced with the standard condition language and the corresponding requirements from Permit No. 9932-AC005 Rev. 1.
6, Exhibit B (Part F), Exhibit C (Test Methods), and Exhibit D (item 4)	Sulfur limits and MR&R	15, 15.1, 15.2, & 17	Changed the sulfur content limit to from 0.25% to 0.16% averaged over any consecutive 12-month period, as revised in Construction Permit Nos. 0032-AC018 Rev. 1 and 9932-AC005, Rev.2. Carried the MR&R language from the standard condition. Added EU ID MG-26 to Condition 15.
7 & 8, Exhibit B (Parts A & I), Exhibit C (Test Methods), and Exhibit D (item 3)	Used Oil Management Standards	None	Conditions not carried forward because the requirements are not covered under the air permits program.

⁷ This table does not include all standard and general conditions.

Permit No. 9932-AA003 Rev 2 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
9 & Exhibit B (Part A)	Disposal of used oil or hazardous waste, 18 AAC 60 & 62, or 40 C.F.R. 261	None	Condition not carried forward because the requirement is not covered under the air permits program.
10 & Exhibit B	Operational limit for EU IDs MG-1, MG-3, MG-4 & MG-5	None	Rescinded the operational limit of 109,660,000 kWh/year and replaced with 2,259 TPY cumulative NOx emission limit in the Construction Permit 9932-AC005.
11 & Exhibit B	Operational limit for EU IDs MG-7, MG-8, & MG-9	22.3e	Same operational limit.
12 & Exhibit B (Part A)	Operational hour limits for EU IDs MG-10 & MXG-100	22.3b	Limit for EU ID MXG-100 not carried forward. EU ID MXG-100 was eliminated from stationary source during 2008, based on supplemental information provided by Permittee on 3/27/13 indicating that MXG-100 was removed when MXG-101 was installed under Permit AQ0290MSS06 Rev1.
13 & Exhibit B (Part A)	Operational hour limit for EU ID 58 (Kelly Hoskinson Incinerator)	None	Not carried forward. The Kelly Hoskinson incinerator is no longer onsite.
14 & Exhibit B (Part A)	Operational hour limit for EU ID MD-4 (Mikropul 49S8-20)	None	Hours of operation were increased in the Construction Permit No. 9932-AC005 from 6750 to 8760 hours per year.
16 & 17 and Exhibit D (Item 6)	Fugitive Dust Control	79	Replaced with the standard condition language adopted and the corresponding requirements from Permit No. 9932-AC005 Rev. 1.
18 and Exhibit F	Ambient Air Quality monitoring – Install and maintain signs to prohibit public access...	Section 4	Superseded by the requirements in Permit No. 9932-AC005 Rev. 2.
20	Perform source tests for NOx, CO and opacity on one of the new Wartsila diesel electric generators...	None	Not carried forward. Requirements already fulfilled.
25	Reporting requirements for recording device when it is malfunctioning or non-operable.	100	No change.
27	General recordkeeping requirements	96	Record retention is now five years per regulation. Standard condition.
Exhibit D (Item 1)	Operating time for each source and kWh for generators	22.3 & 18	Revised, as required in Construction Permit Nos. 0032-AC018 Rev. 1 and 9932-AC005 Rev.2.
Exhibit D (Item 2)	Fuel consumption and type	21.1 & Table C	Applies only to EU IDs MG-7, MG-8, MG-9, MG-14 MG-15, MG-16, MG-19 and MG-20 for the purpose of monitoring emissions thresholds for these emission units.
Exhibit D (Item 5)	Amount and category of Solid waste	84	Requirement is carried forward in association with the Open Burning conditions.

Table J - Comparison of Minor Source Specific Permit No. AQ0290MSS02 Conditions to Operating Permit No: AQ0290TVP02 Conditions⁸

Permit No. AQ0290MSS02 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
1	Emission Unit Inventory	Section 2	EU IDs MD-7 and MD-8 have been incorporated into the emission unit inventory. Footnotes have been added to Table A to clarify that MD-7 and MD-8 are the baghouse controls (emission points) for MF-2 and MF-3 respectively. EU IDs MF-2 and MF-3 were the non-industrial processes listed in AQ02090TVP01, but these emission unit identifiers are no longer relevant with the approved installation of EU IDs MD-7 and MD-8.
2 and 3	Requirements to Avoid PSD Classification under 18 AAC 50.502(c)(3)	27.2 and 27.3	Same requirements.

Table K - Comparison of Minor Source Specific Permit No. AQ0290MSS03 Conditions to Operating Permit No: AQ0290TVP02 Conditions⁹

Permit No. AQ0290MSS03 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
1	Emission Unit Inventory	Section 2	Emission Unit MD-9 has been incorporated into the emission unit inventory.
5	Visible Emission Standards	1	Similar requirements incorporated in Condition 1.
6	Particulate Matter Standards	7	Similar requirements already incorporated in Condition 7.

Table L - Comparison of Minor Source Specific Permit No. AQ0290MSS06, Revision 1 Conditions to Operating Permit No: AQ0290TVP02 Conditions¹⁰

Permit No. AQ0290MSS06 Rev 1 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
1	Emission Unit Inventory	Section 2	Emission Units PRC-1 and PRC-2; PRC-3 through PRC-11; and MXG-1 01 have been incorporated into the emission unit inventory.
2	Maintenance Requirements	77.3	Same requirement.

⁸ This table does not include all standard and general conditions.

⁹ This table does not include all standard and general conditions.

¹⁰ This table does not include all standard and general conditions.

Permit No. AQ0290MSS06 Rev 1 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
6	Visible Emission Standards	6	Requirements carried forward with the following revisions: Added Condition 6.1c within 24 hours following the startup of the rock crusher after a shutdown period of more than five days and Condition 6.3 Include copies of the records of crusher operation with the operating report required by Condition 102 for the period covered by the report.
7	Visible Emission Standards (EU ID MXG-101)	NA	Permittee provided supplemental information on 3/27/13 indicating MXG-101 is a nonroad engine. The SIP visible emissions requirement is not applicable.
8	Particulate Matter Standards (EU ID MXG-101)	NA	Permittee provided supplemental information on 3/27/13 indicating MXG-101 is a nonroad engine. The SIP PM emissions requirement is not applicable.
9	Sulfur Dioxide Standards (EU ID MXG-101)	NA	Permittee provided supplemental information on 3/27/13 indicating MXG-101 is a nonroad engine. The SIP SO2 emissions requirement is not applicable.
10	Minor Permit under '18 AAC 50.502(c)(3Xii) Classification Avoidance – Fuel Sulfur Limit	17	Same Requirement
11	Prevention of Significant Deterioration (PSD) Modification Avoidance Requirements for Nitrogen Oxide Emissions.	24.2	Same Requirement.
12	Fugitive Emissions	79.8	Same Requirement.
13	Ambient Air Quality Protection Requirements	19.4 and 19.5	Same Requirement.

Table M - Comparison of Minor Source Specific Permit No. AQ0290MSS07 Conditions to Operating Permit No: AQ0290TVP02 Conditions¹¹

Permit No. AQ0290MSS07 Condition Number	Description of Requirement	Permit No. AQ0290TVP02 Condition Number	How condition was revised
1	Emission Unit Inventory	Section 2	Emission Unit MG-26 has been incorporated into the emission unit inventory.
5	Owner Requested Limit to Avoid Classification Under 18 AAC 50.502(c)(3)	28	Same Requirement.

¹¹ This table does not include all standard and general conditions.

Table N - Comparison of Operating Permit AQ0290TVP02 Conditions to Operating Permit AQ0290TVP02, Revision 1 Conditions

Permit No. AQ0290TVP02 Condition Number	Description of Requirement	Permit No. AQ0290TVP02, Revision 1 Condition Number	How condition was revised
Section 2, Note 5	Emission Unit Inventory	Section 2, Note 5	The significant emission unit classification for EU ID MH-4 is removed.
1	Visible Emission Standards	1	EU IDs MH-4 and MH-5 are removed from the condition because they are insignificant due to emissions under 18 AAC 50.326(e).
1.1	Visible Emission Standards	1.1	EU ID MH-4 is removed from the condition because it is insignificant due to emissions. EU ID MF-1 is added to the condition because it is no longer included in Condition 1.3.
1.3	Visible Emission Standards	1.3	EU ID MF-1 is removed from the condition because it is not subject to the requirements of 40 C.F.R. 60 Subpart LL.
3.1	Visible Emission Standards	3.1	EU ID MH-4 is removed from the condition because it is insignificant due to emissions.
7	Particulate Matter Emission Standards	7	EU IDs MH-4 and MH-5 are removed from the condition because they are insignificant due to emissions.
7.2	Particulate Matter Emission Standards	7.2	EU ID MH-4 is removed from the condition because it is insignificant due to emissions.
7.3	Particulate Matter Emission Standards	7.3	EU ID MF-1 is added to the condition because Condition 7.4 was removed.
7.4	Particulate Matter Emission Standards	None	Condition 7.4 was removed from the permit because EU ID MF-1 is not subject to the requirements of 40 C.F.R. 60 Subpart LL.
11	Particulate Matter Emission Standards	11	EU IDs MH-4 and MH-5 are removed from the condition because they are insignificant due to emissions.
14 and 14.1a	Particulate Matter Emission Standards	14 and 14.1a	EU ID MF-1 is added to the conditions because the unit is not subject to the requirements of 40 C.F.R. 60 Subpart LL.
15	Sulfur Compound Emission Standards	15	EU IDs MH-4 and MH-5 are removed from the condition because they are insignificant due to emissions.
22.4 through 22.7	SO ₂ Limit	18 and 18.1 through 18.4	Conditions are moved to show the limit is for ambient air quality protection.
19	BACT	20	EU ID MH-5 is added to the condition because it is no longer included under EU ID MH-4.
Table B	BACT	Table B	EU ID MH-5 is added to the table because it is no longer included under EU ID MH-4.
19.3a	BACT	20.3a	EU ID MH-4 is removed from the condition because it is insignificant due to emissions.
None		20.3b	Condition is added because EU IDs MH-4 and MH-5 are insignificant due to emissions.
29	Insignificant Emission Units	30	EU ID MH-5 is added to the condition because it is no longer included under EU ID MH-4.

Permit No. AQ0290TVP02 Condition Number	Description of Requirement	Permit No. AQ0290TVP02, Revision 1 Condition Number	How condition was revised
29.4d	Insignificant Emission Units	30.4d	EU ID MH-4 is changed to EU ID MH-5 because EU ID MH-5 is no longer included under EU ID MH-4.
35	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	36	EU ID MF-1 is removed and EU ID PRC-1 is changed to EU ID PRC-2 because EU ID MF-1 and PRC-1 are not subject to NSPS subpart requirements.
39	NSPS Subpart A Good Air Pollution Control Practice	40	EU ID MF-1 is removed and EU ID PRC-1 is changed to EU ID PRC-2 because EU ID MF-1 and PRC-1 are not subject to NSPS subpart requirements.
40	NSPS Subpart A Credible Evidence	41	EU ID MF-1 is removed and EU ID PRC-1 is changed to EU ID PRC-2 because EU ID MF-1 and PRC-1 are not subject to NSPS subpart requirements.
43, 43.3b(i), and 43.3c	NSPS, Subpart LL Requirements	44, 44.3b(i), and 44.3c	EU ID MF-1 is removed from the conditions because MF-1 is a collection of mill building exhausts and vents that are not directly connected to a Subpart LL affected facility.
44 and 45	NSPS, Subpart OOO Requirements	45 and 46	EU ID PRC-1 is removed from the condition. As specified in AQ0290MSS06, EU ID PRC-1 is a feed hopper. Hoppers are not affected facilities under 40 C.F.R. 60.670(a). Additionally, truck dumping of nonmetallic minerals into any feed hopper is exempt from the particulate matter standards under 40 C.F.R. 60.672(d).
45.3	NSPS, Subpart OOO Requirements	46.3	The condition is revised to clarify that the exemption is from the requirements of Condition 46. Additionally, EU ID PRC-1 is removed from the condition.
46.4	NSPS Subpart OOO Test Methods and Procedures	47.4	Corrected typographical error.
64.1a	NESHAP Subpart DDDDD Requirements	65.1a	Corrected "June 30" to "July 31" in accordance with subpart requirements.
64.1c	NESHAP Subpart DDDDD Requirements	65.1c	Corrected "5-year period" to "2-year period".
97	Submittals	98	Corrected the condition number reference in the last sentence of the condition.

NON-APPLICABLE REQUIREMENTS

Each permit is required to contain a discussion of all applicable requirements as set forth in 40 C.F.R. 71.6(a) adopted in 18 AAC 50.040(j). This section discusses selected conditions that are not included in the permit for specific reasons.

- **New Source Performance Standards (40 C.F.R. 60, Subpart Kb):** The requirement for the Permittee to keep records showing the dimensions and capacity of EU IDs MT-1 through MT-4, as previously required under NSPS Subpart Kb, has not been included in the renewal permit because Subpart Kb no longer requires these records.
- **Risk Management Plan (40 C.F.R. 68):** The stationary source is not subject to the general duty clause under the Clean Air Act Section 112(r)(1) (40 C.F.R. 68.10) because the Red Dog Mine, a lead and zinc ore mine, does not process or store regulated flammable or toxic substances in excess of threshold quantities in a process as determined in 40 C.F.R. 68.115.
- **Compliance Assurance Monitoring (40 C.F.R. 64):** Compliance Assurance Monitoring (CAM) does not apply because these emission units have no applicable requirements under 40 C.F.R. 64.2. The Department has determined that unrestricted PM emissions for these individual EU IDs will be less than 100 tpy per emission unit and/or the control device is not required to comply with the SIP and/or NSPS, Subpart. LL PM limits; and/or the control device, especially the wet scrubbers, meet the exemption per 40 C.F.R.64.2(b)(vi) (i.e., emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method, as defined in 40 C.F.R.64.1).

STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The State and Federal regulations for each condition are cited in Operating Permit No. AQ0290TVP02. This Statement of Basis provides the legal and factual basis for each term and condition as set forth in 40 C.F.R. 71.6(a)(1)(i).

Conditions 1, and 3 - 6, Visible Emissions Standard and MR&R

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

- 18 AAC 50.055(a) applies to the operation of fuel-burning equipment and industrial processes. EU IDs MG-1 through MG-9, MG-11 through MG-22, MF-1, MC-1, MD-1, MD-4 through MD-10¹², PRC-1 through PRC-11, MG-26, and MH-1 through MH-3 are fuel-burning equipment or industrial processes.

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

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

MR&R requirements are listed in Conditions 3 through 6 of the permit.

These conditions have been adopted into regulation as part of Standard Permit Condition IX, updated as of September 27, 2010 for visible emissions except as described below. Condition 3 was updated to account for emission rate based insignificant emission units MG-1 – MG-6, MG-17 and 18 that are subject to quarterly visible emissions monitoring based on construction permit decisions.

The Permittee must establish by actual visual observations that can 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 and particulate matter.

These conditions detail a stepwise process for monitoring compliance with the State's visible emissions and particulate matter standards for liquid and gas fired emission units. Equipment types covered by these conditions are 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 emission units either through maintenance programs and/or more rigorous tests that will quantify whether a specific emission standard has been exceeded.

Liquid Fuel-Fired Equipment: Certain emission units are subject to periodic monitoring as set out in the Title I construction permits. These are re-stated in this permit.

Monitoring – The visible emissions shall be observed using the Method-9 Plan as detailed in Condition 3.5 or the Smoke/No-Smoke Plan as detailed in Condition 3.6. The Permittee is required to conduct PM source testing if threshold values for opacity are exceeded.

¹² See footnote 1 to AQ0290TVP02; and footnote 4 to Table A - Emission Unit Inventory.

Recordkeeping - The Permittee is required to record the results of visible emissions observations.

Reporting - The Permittee is required to report: 1) incidents when emissions in excess of the opacity threshold values have been observed, and 2) results of visible emission source tests. The Permittee is required to include copies of the results of all visible emission observations with the operating report.

Note: For EU IDs MG-7 through MG-9, MG-11 through MG-16, and MG-19 through MG-22 as long as the individual emission unit does not exceed the applicable rolling 12-month fuel usage or emissions threshold limits in Table C monitoring shall consist of an annual statement of compliance with the visible emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report visible emissions in accordance with Conditions 3 through 5 for that emission unit for the remainder of the permit term.

For EU ID MG-26, as long as the emission unit does not exceed the applicable rolling 12-month operating time limit in Condition 28, monitoring shall consist of an annual statement of compliance with the visible emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report visible emissions in accordance with Conditions 3 through 5 for that emission unit for the remainder of the permit term.

Dust Emission Units (EU IDs MD-1, MD-4, and MD-6 through MD-10):

The Permittee shall comply with the applicable opacity standards and MR&R requirements specified at Condition 44 (NSPS, Subpart LL), as referenced in Condition 1.

Dust Emission Units (EU IDs MD-5) and the Concrete Batch Plant (EU ID MC-1):

Monitoring – The visible emissions shall be observed using the Method-9 Plan as detailed in Condition 3.5 or the Dust/No-Dust Plan as detailed in Condition 3.6. The Permittee is required to conduct PM source testing if threshold values for opacity are exceeded.

Recordkeeping - The Permittee is required to record the results of visible emissions observations.

Reporting - The Permittee is required to report: 1) incidents when emissions in excess of the opacity threshold values have been observed, and 2) results of visible emission source tests. The Permittee is required to include copies of the results of all visible emission observations with the operating report.

Note: For EU ID MD-5, as long as the emission unit does not exceed the applicable rolling 12-month fuel usage or emissions threshold limits in Table C as determined in accordance with Condition 21, monitoring shall consist of an annual statement of compliance with the visible emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report visible emissions in accordance with Conditions 3 through 5 for that emission unit for the remainder of the permit term.

Portable Rock Crushing Operations:

Monitoring – Condition 6 sets out the visible emissions monitoring, recordkeeping and reporting. For PRC-1 through PRC-11, the visible emissions shall be observed according to Condition 6.

Recordkeeping - The Permittee is required to record the results of visible emissions observations according to Conditions 6.1 through 6.3.

Reporting - The Permittee is required to report the results of visible emissions observations according to Conditions 6.1 through 6.3.

Condition 2, Incinerator Visible Emissions and MR&R

Legal Basis: This visible emission standard under 18 AAC 50.050(a) applies to the operation of any incinerator in Alaska, including an air curtain incinerator.

Factual Basis: For EU IDs MI-2 and MI-3, Condition 2 prohibits the Permittee from causing or allowing visible emissions in excess of the applicable standard in 18 AAC 50.050(a). Condition 2 applies to State visible emissions standards to each solid waste incinerator. The Permittee shall not cause or allow the equipment to violate this standard. The Permittee is required to monitor, record, and report according to Condition 2.1.

Conditions 7 - 13, Particulate Matter (PM) Standard

Legal Basis: These conditions ensure compliance with the applicable requirements in 18 AAC 50.055(b). These requirements apply to operation of all industrial processes and fuel burning equipment in Alaska.

- EU IDs MG-1 through MG-9, MG-11 through MG-22, SRU-1, MF-1, MC-1, MD-1 and MD-4 through MD-10, PRC-1 through PRC-11, MXG-101, and MH-1 through MH-3.

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

Factual Basis: Condition 7 prohibits emissions in excess of the State PM (also called grain loading) standard applicable to fuel-burning equipment and industrial processes. The Permittee shall not cause or allow fuel-burning equipment nor industrial processes to violate this standard.

MR&R requirements are listed in Conditions 8 through 13 of the permit.

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

Liquid Fuel-Fired Equipment:

For liquid fuel units the MR&R conditions are Standard Permit Condition IX adopted into regulation pursuant to AS 46.14.010(d). Except as discussed below, the Department determined that these standard permit conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). The standard permit condition text for Condition 8.2 has a material error. Under the standard language, an owner or operator could assert that an engine with a narrow diameter exhaust stack would need to conduct performance testing only if opacity is between 15 and 20 percent opacity, but not for emissions greater than 20 percent opacity. The Department corrected the material error. Beyond as noted, no emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard permit conditions meet the requirements of 40 C.F.R. 71.6(a)(3).

Note: For EU IDs MG-7 through MG-9, MG-11 through MG-16, and MG-19 through MG-22 as long as the individual emission unit does not exceed the applicable rolling 12-month fuel usage or emissions threshold limits in Table C, as determined in accordance with Condition 21, monitoring shall consist of an annual statement of compliance with the particulate matter standard based on reasonable inquiry. Otherwise, monitor, record, and report in accordance with Conditions 8 and 9 for that emission unit for the remainder of the permit term.

Operational monitoring, recording and reporting for EU IDs MH-1 through MH-3 shall be conducted in accordance with Conditions 11 through 13. For EU IDs MG-26, as long as the emission unit does not exceed the applicable rolling 12-month operating time limit in Condition 28, monitoring shall consist of an annual statement of compliance with the visible emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report in accordance with Conditions 8 and 9 for that emission unit for the remainder of the permit term.

Dust Emission Units (EU IDs MF-1, MD-1 and MD-4 through MD-10) and the Concrete Batch Plant (EU ID MC-1):

For EU IDs MF-1, MD-1 and MD-4 through MD-10, the Permittee is required to monitor, record, and report in accordance with Condition 14. For MG-26, as long as the unit does not exceed the limit in Condition 28, then submit and annual compliance certification. Otherwise, monitor, record and report as set out in Conditions 8 and 9.

For the concrete batch operations (EU ID MC-1), the Permittee is required to monitor, record and report in accordance with Conditions 3, 4, and 5 (Visible Emissions MR&R).

Portable Rock Crushing Operations (EU IDs PRC-1 through PRC-11):

For the portable rock crushing operations (EU IDs PRC-1 through PRC-11), monitor, record and report in accordance with Conditions 19.4 and 19.5, and 79.8 through 79.10.

Condition 15, Sulfur Compound Emissions

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

- EU IDs MG-1 through MG-9, MG-11 through MG-22, SRU-1, MF-1, MG-26, MXG-101 and MH-1 through MH-3 are fuel-burning equipment and industrial processes.

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

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

Sulfur dioxide comes from the sulfur in the fuel (e.g. coal, natural gas, fuel oils).

Liquid Fuels: For oil-fired fuel burning equipment, the MR&R conditions are Standard Permit Conditions XI and XII adopted into regulation pursuant to AS 46.14.010(d).

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

The Department used 0.45% by weight sulfur for fuel grades as stated below. Also, the Department added MR&R for the 0.15% annual average fuel sulfur ambient air quality standard because the ambient condition cross-referenced Condition 15's MR&R.

Conditions 16 - 29, Pre-Construction Permit Requirements (Ambient Air Quality Standards, Maximum Allowable Ambient Concentrations, BACT Limits and Owner Requested Limits (ORLs))

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

Factual Basis: Condition 16 (Ambient Air Quality Standards, Maximum Allowable Ambient Concentrations). This condition ensures that allowable emissions from the stationary source and associated growth will not cause an ambient concentration at any location that does not or would not meet the ambient air quality standard or maximum allowable ambient concentration respectively specified at 18 AAC 50.010 or Table 3 of 18 AAC 50.020.

Condition 16 requires that the Permittee comply with the requirements of the Public Access Control Plan found in Section 4 (Conditions 31 - 34). This requirement was carried forward from Construction Permit No. 9932-AC005 Rev. 2, effective 7/16/03 and Minor Permit No. AQ0290MSS05, effective 6/9/06.

For PSD Avoidance and ambient air quality increment purposes, Condition 17 contains Sulfur Dioxide Requirement that limit the sulfur content of liquid fuel combusted in all fuel oil-burning emission units listed in Table A to 0.45 percent by weight at any time and 0.16 percent averaged over the most recent 12 consecutive months. For ambient air quality, this condition cross-references Condition 15 for MR&R.

Condition 19 contains Fugitive Particulate Matter Requirements carried forward from Construction Permit No. 9932-AC005 Rev. 2, effective 7/16/03 and Minor Permit No. AQ0290MSS06 Rev. 1, effective 5/5/09 and applies to the mine roads, EU ID MF-5, and the portable rock crushing plant, EU IDs PRC-1 through PRC-11.

Condition 20 (BACT Limits). On December 10, 1999, Construction Permit 9932-AC005 became effective. This permit was subsequently revised twice, on June 10, 2003 and July 16, 2003. The Department made BACT determinations for the heater group, and small engines in 1999 for the “Production Rate Increase” Construction Permit No. 9932-AC005. BACT limits for Source EU IDs MG-19, MG-20, MG-21 were established as part of Revision 1 to the construction permit. According to information contained in the Construction Permit 9932-AC005, Revision 2, the BACT limits for the Wartsila Generators, MG-1, MG-3, and MG-4 originate from the BACT limits contained in the original 1988 PSD permit 8732-AA009. The Wartsila Generators’ limits were removed in a 1994 permit action and subsequently, re-imposed as part of Revision 2 to 9932-AC005. For Condition 20.4b the underlying requirement from Permit to Operate 9932-AC005 Rev 2 is ambiguous as to “how much” EU ID MI-3 must operate each month of every 6-month period to trigger a PM source test. In order to resolve the ambiguity, the Department added Condition 20.4b(ii) with the intent to ensure that no more than 1 test each calendar year is conducted if triggered, or at least one test during the effective period of the permit.

The requirements of Condition 22.1.b, Permit No. 9932-AC005 Rev 2, 7/16/03 have been fulfilled. The SCR has been installed and EU ID MG-17 was first source tested in 2004 and again in 2005.

The Department requires MR&R as set out in Condition 20 to ensure units comply with their BACT limit. The Permittee may test one of each group every five years unless the units trigger increased source testing.

Conditions 21 - 29 (ORLs). Throughout the permitting history of this source, the Permittee has requested that Owner Requested Limits (ORLs) be included in the permit to keep the facility’s increase in potential emissions of CO, NO_x, SO₂, and PM to avoid a PSD review under 18 AAC 50.306 and/or a minor permit under 18 AAC 50.502.

In addition to ORLs established in prior minor and construction permits, the Permittee requested Condition 21 as an ORL during preparation of initial operating permit AQ0290TVP01. The affected emission units (EU IDs EU IDs MG-7 through MG-9, MG-11 through MG-16, MG-19 through MG-22, MD-1, and MD-4 through MD-6) are subject to operational restrictions in order to meet BACT limits and to avoid PSD classification under 18 AAC 50.300(h)(3). This notwithstanding, Condition 21.3b requires certification that the units did not exceed state emission standards during the previous year and did not emit any prohibited air pollution. For these units if they do not exceed the fuel usage and PM emission limits stated in Condition 21, they are considered insignificant units only with respect to 18 AAC 50.326(e) and no further monitoring is required under the operating permit in accordance with Department Policy and Procedure No. AWQ 04.02.103, Topic # 3, 10/8/04 for standby emission units (Note: The Permittee must still comply with the applicable NSPS, Subpart LL (EU IDs MD-1, MD-4, and MD-6) and NESHAP, Subpart ZZZZ (EU IDs MG-7 through MG-9, MG-11 through MG-16, and MG-19 through MG-22) requirements provided at Conditions 44 and 52.)

Condition 22 is an ORL carried forward from Construction Permit No. 0032-AC018 Rev. 1 that limits the simultaneous operation of the larger diesel generators and imposes a pound per hour CO emission limit; and limits operation of EU ID MG-18, with the intention of limiting CO emissions to avoid a PSD review. The Department imposed MR&R to ensure each unit type complies with the CO limit modeled after Condition 20.

Condition 23 limits SO₂ emissions from the source to avoid a PSD review by complying with the requirements of Condition 15. These requirements were originally established in Construction Permit No. 0032-AC018 Rev.1 and Construction Permit No. 9932-AC005 Rev. 2. MR&R is cross-referenced from Condition 15.

To avoid a PSD review, Condition 24 limits NO_x emissions from EU ID MG-18 and limits the operating hours of EU ID MXG-101. Recurring testing has been included for MG-18 to demonstrate compliance with the short-term NO_x limit under this ORL. The Permittee is also required to install a continuous monitoring system for recording of emission unit operating hours

Condition 25 is an ORL to avoid PSD review by limiting NO_x emission rates from EU IDs MG-1 through MG-6 and MG-17; and for PSD BACT, the installation and operation of Selective Catalytic Reduction (SCR) control for NO_x emissions control of MG-17 based on EPA's CAA Part 168 order. Recurring NO_x and ammonia source testing of EU ID MG-17 is required to demonstrate compliance with the short-term emission limits under this condition.

To avoid PSD review for particulate matter (PM), the Permittee shall comply with the requirements in Condition 26 to limit PM emissions from EU IDs MG-1 through MG-6 and MG-18. PM Recurring Testing is required to demonstrate compliance with the short-term PM limits under this condition.

Condition 27 limits the hours of operation for EU IDs MG-7 and MG-8 in order to avoid PSD Classification and Minor Permit Classification for Particulate Matter Under 18 AAC 50.502(c)(3). In addition, MR&R includes weekly readings of pressure differential across the bags in the baghouse, and corrective action/maintenance as recommended by the manufacturer as needed.

Condition 28 is a limit to avoid minor permit classification for NO_x under 18 AAC 50.502(c)(3)(A)(iii). The Permittee shall limit operation of EU ID MG-26 to 500 hours per 12 consecutive month period. Installation of a non-resettable hour meter is required, along with monitoring, record keeping and reporting of the monthly and 12 consecutive months of emission unit operation.

Condition 29 limits the sulfur content of fuel combusted in EU ID MXG-101 to no more than 0.16 percent by weight per 12 consecutive month period in order to avoid classification under 18 AAC 50.502(c)(3)(A)(ii). The Permitted shall demonstrate compliance with this ORL by complying with the MR&R requirements of Condition 15.

Condition 30, Insignificant Emission Units

Legal Basis: The Permittee is required to meet State emission standards set out in 18 AAC 50.055 for all industrial processes fuel-burning equipment and incinerators regardless of size.

Factual Basis: The condition re-iterates the emission standards and requires compliance for insignificant emission units not otherwise listed in the permit. The Permittee may not cause or allow their equipment to violate these standards. Insignificant emission units are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

The Department finds, with the exception of EU ID MH-5, the insignificant units at this stationary source, do not require specific monitoring, recordkeeping and reporting to ensure compliance under this condition. Specific monitoring, recordkeeping and reporting is included in Conditions 58 through 66 for EU ID MH-5 (Emulsion Plant Boiler, EU Name 14-108). Condition 30.4a requires certification that the emission units did not exceed State emission standards during the previous year and did not emit any prohibited air pollution.

Conditions 31 - 34, Public Access Control Plan and General Requirements for Ambient Air Quality Protection

Legal Basis: Conditions 31 through 34 apply because the stationary source ambient air boundary has not been well marked in the past.

Factual Basis: Conditions 31 through 34 are adopted from Construction Permit No. 9932-AC005 Rev. 2, issued July 16, 2003. The Public Access Control Plan is required because of the hazardous nature of the activities at the stationary source and predicted exceedances of ambient air quality standards and increments within the boundary.

Conditions 35 – 43, NSPS Subpart A Requirements

Legal Basis: The Permittee must comply with the applicable New Source Performance Standard (NSPS) provisions incorporated by reference, for specific industrial activities, as listed in 18 AAC 50.040¹³.

¹³ EPA has not delegated to the Department the authority to administer the NSPS program as of the issue date of this permit.

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 MD-1 through MD-4, MD- 6 through MD-10 and MF-4 are subject to NSPS Subpart LL, EU IDs PRC-2 through PRC-11 are subject to NSPS Subpart OOO, and EU ID MG-26 is subject to NSPS Subpart IIII; therefore, these affected facilities are subject to Subpart A. It is noted that the Permittee installed EU IDs MD-7 and MD-8 (AQ0290MSS02) as respective baghouse particulate matter emissions control for EU IDs MF-2 and MF-3. EU IDs MF-2 and MF3 are the listed emission points in the Source Inventory table (Table 1) of AQ0290TVP01; however, this renewal permit refers to EU IDs MD-7 and MD-8 as the emission points in place of MF-2 and MF-3, respectively.

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

Condition 35 - The Permittee has already complied with the initial notification requirements in 40 C.F.R. 60.7(a)(1) and (3) for EU IDs MD-1 through MD-4, MD-6 through MD-10, and MF-4. However, the Permittee is subject to 40 C.F.R. 60.7(a)(1), (a)(3), and/or (a)(4) in the event of a new NSPS affected facility¹⁴ or in the event of a modification or reconstruction of an existing facility¹⁵ into an affected facility.

For EU ID MG-26, which is an emergency stationary ICE, the Permittee is not required to submit an initial notification per 40 C.F.R. 60.4214(b).

The notification requirement in 40 C.F.R. 60.7(a)(1) is waived for EU IDs PRC-2 through PRC-11 per 40 C.F.R. 60.676(h) (see Condition 48.2).

Condition 35.7 - 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 36 – Start up, shutdown, or malfunction record maintenance requirements in 40 C.F.R. 60.7(b) are applicable to all NSPS affected facilities subject to Subpart A.

Conditions 37 and 38 - NSPS excess emission reporting requirements and summary report form in 40 C.F.R. 60.7(c) & (d) are applicable to EU ID(s) MD-2 or MD-3. 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.

Condition 39 - The Permittee is subject to testing 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 40 - Good air pollution control practices in 40 C.F.R. 60.11 are applicable to all NSPS affected facilities subject to Subpart A (EU IDs MG-26, MD-1 through MD-4, MD-6 through MD-10, MF-4, and PRC-2 through PRC-11).

¹⁴ *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.

¹⁵ *Existing facility* means, with reference to a stationary source, any apparatus of the type for which a New Source Performance Standard (NSPS) is promulgated, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type, as defined in 40 C.F.R. 60.2.

Condition 41 - States that any credible evidence may be used to demonstrate compliance or establishing violations of relevant NSPS standards for EU IDs MG-26, MD-1 through MD-4, MD-6, MD-9, MF-4, and PRC-2 through PRC-11.

Condition 42 - Concealment of emissions prohibitions in 40 C.F. R. 60.12 are applicable to EU IDs MG-26, MD-1 through MD-4, MD-6, MD-9, MF-4, and PRC-2 through PRC-11.

Condition 43 - Monitoring requirements in 40 C.F.R. 60.13 are applicable to EU IDs MD-2 and MD-3 because a CMS is used to determine compliance with Subpart LL wet scrubber operating parameter requirements.

Condition 44, NSPS Subpart LL Requirements

Legal Basis: The Permittee shall comply with the applicable provisions of 40 C.F.R. 60, Subpart LL – Standards of Performance for Metallic Mineral Processing Plants as the standards apply to the Primary Jaw Crusher Baghouse (EU ID MD-1), the #1 Coarse Ore Conveyor A Wet Scrubber (EU ID MD-2), the #2 Coarse Ore Conveyor B Wet Scrubber (EU ID MD-3), the Assay Lab Bucking Room Baghouse (EU ID MD-4), the Gyratory Crusher Baghouse (EU ID MD-6), the Jaw Crusher Dump Pocket Baghouse (EU ID MD-7), the Gyratory Crusher Dump Pocket Baghouse (EU ID MD-8), the Coarse Ore Storage Building Baghouse (MD-9), the Concentrate Storage Building Baghouse (MD-10), the Mine CSB and the truck loading station doors and vents (EU ID MF-4).

- EU IDs MD-1 through MD-4, MD-6 through MD-10, and MF-4, fall within this category and are therefore subject to Subpart LL.

Note: In accordance with AQ0290MSS02, the Permittee installed EU IDs MD-7 and MD-8 as respective baghouse particulate matter emissions controls for EU IDs MF-2 and MF-3. While EU IDs MF-2 and MF3 are the listed emission points in Table 1 (Source Inventory) of AQ0290TVP01, this renewal permit now refers to EU IDs MD-7 and MD-8 as the emission points in place of MF-2 and MF-3, respectively.

Factual Basis: This condition incorporates the Subpart LL particulate matter and opacity standards. The Permittee may not cause or allow EU IDs MD-1 through MD-4, MD-6 through MD-10, and MF-4 to violate these standards. In accordance with 40 C.F.R. 71, particulate matter and opacity recurring testing has been included in the permit to periodically demonstrate compliance with the PM and opacity limits. In addition, monitoring of the wet scrubber operations associated with EU IDs MD-2 and MD-3 is required. The Permittee must comply with reporting and recordkeeping requirements pursuant to 40 C.F.R. 60.385(a) - (d).

Conditions 45 - 48, NSPS Subpart OOO Requirements

Legal Basis: NSPS Subpart OOO applies to nonmetallic mineral processing plants whose construction, reconstruction, or modification commences after August 31, 1983. EU IDs PRC-2 through PRC-11 are subject to Subpart OOO.

Factual Basis: The conditions require the Permittee to comply with the Subpart OOO fugitive particulate matter standards (as opacity limits). The Permittee may not cause or allow EU IDs PRC-2 through PRC-11 to violate these standards. The Permittee shall perform monitoring, record keeping and reporting as specified at Condition 46.4 to demonstrate ongoing compliance with the opacity limits.

Conditions 49 - 50, 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 ID MG-26 is subject to Subpart III under 40 C.F.R. 60.4200 because it is a stationary CI ICE constructed after July 11, 2005 and it was manufactured after April 1, 2006. EU ID MG-26 is an emergency generator. While EU ID MXG-101 was constructed after the rule applicability date, the unit is a non-road engine and is not subject to this rule.

Factual Basis: These conditions incorporate the Subpart III emissions standards applicable to EU ID MG-26. The Permittee may not cause or allow EU ID MG-26 to violate these standards. These conditions also provide MR&R specifically called out for within the subpart. The Permittee is required to operate and maintain the stationary CI ICE according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer.

For EU ID MG-26, the Permittee shall certify that the emission standards for new nonroad CI engines in 40 C.F.R. 60.4206 or 60.4204 (respectively) are met, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency or nonemergency stationary CI ICE. The engine must be installed and configured according to the manufacturer's specifications. The Permittee shall meet the applicable fuel requirements in 40 C.F.R. 60.4207.

For EU ID MG-26, an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

Note: The Permittee identified EU IDs MG-10, MG-23, MG-24, MG-25, MXG-101 as non-road engines. Several other engines, including EU IDs MG-14, MG-15 and MG-16, were identified as portable emission units by the Permittee, and the Red Dog Mine plans to keep the engines permitted as stationary emission units in the event the engines are used as stationary emission units.¹⁶ This notwithstanding, the requirements of NSPS Subpart III are not applicable to these stationary internal combustion engines since they did not commence construction, modification, or reconstruction after July 11, 2005.

Condition 51, NESHAP Subpart A Requirements

Legal Basis: The Department has incorporated by reference the NESHAP requirements effective July 30, 2010, for specific industrial activities, as listed in 18 AAC 50.040(c).

Most affected facilities subject to a NESHAP requirement are subject to Subpart A.

¹⁶ Email from Red Dog Mine to Jim Plosay of ADEC received on June 4, 2010.

Factual Basis: This condition incorporates applicable 40 C.F.R. 63 requirements. The Permittee may not cause or allow violations of these requirements. The Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A as specified in the provisions for applicability of Subpart A in 40 C.F.R. 63, Subpart ZZZZ Table 8 and Subpart DDDDD Table 10.

Conditions 52 - 57, NESHAP Subpart ZZZZ Requirements

Legal Basis: The provisions of 40 C.F.R. 63, Subpart ZZZZ apply to owners or operators of a stationary Reciprocating Internal Combustion Engine (RICE) at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand. This stationary source is an major source of HAP emissions, subject to the provisions of NESHAP Subpart ZZZZ under 40 C.F.R. 63.6590(a)(1)(iii) for existing RICE <500 HP whose construction commenced before June 12, 2006 (i.e., EU IDs MG-11 through MG-16 and MG-19 through MG-22); existing RICE >500 HP whose construction commenced before December 19, 2002 (i.e., EU IDs MG-1 through MG-6, MG-17, and MG-18); and under 40 C.F.R. 63.6590(a)(2)(ii) for new emergency RICE whose construction commenced after June 12, 2006 (i.e., EU ID MG-26).

Factual Basis: Pursuant to 40 C.F.R. 63.6585, diesel-fired generators EU IDs MG-1 through MG-6, MG-11 through MG-22, and MG-26 are affected stationary RICEs subject to NESHAP Subpart ZZZZ. In accordance with 40 C.F.R. 63.6590(a)(1)(iii), EU IDs MG-1 through MG-6, and MG-11 through MG-22 are considered existing stationary RICEs.

In accordance with 40 C.F.R. 63.6590(a)(2)(ii), EU ID MG-26 is considered a new stationary RICE because it was constructed after June 12, 2006. EU ID MG-26 is a new emergency RICE. For EU ID MG-26, the Permittee must meet the requirements 40 C.F.R. 63, Subpart ZZZZ by meeting the requirements of 40 C.F.R. 60, Subpart IIII. No further requirements apply to MG-26 under Subpart ZZZZ.

For EU IDs MG-1 through MG-6, and MG-11 through MG-22, the Permittee must comply with 40 C.F.R. 63, Subpart ZZZZ no later than May 3, 2013.

EU IDs MG-1 through MG-6, MG-17, and MG-18, are existing non-emergency RICEs, each with a site rating of greater than 500 brake horsepower (HP) and are therefore subject to the applicable numerical emission limitations found in Table 2c of Subpart ZZZZ. These emission units are also required to install a continuous parameter monitoring system under 40 C.F.R. 63.6625(b).

EU IDs MG-13 through MG-16 are existing non-emergency RICEs, each with a site rating of greater than 100 HP, but less than 500 HP. These units are subject to the applicable numerical emission limitations found in Table 2c of Subpart ZZZZ. These emission units are also subject to crankcase ventilation or filtration emissions control system installation.

EU IDs MG-11, MG-12, and MG-19 through MG-22 are existing stationary emergency RICE, each with a site rating of less than 500 HP. These units are not subject to a numerical emission limit. The Permittee must comply with the operational limitations for emergency generators for EU IDs MG-7 through MG-9, MG-11, MG-12, and MG-19 through MG-22, under 40 C.F.R. 63.6640(f). Non-emergency RICE units with ratings > 300 Hp (EU IDs MG-1 through MG-6 and MG-13 through MG-18) are subject to numerical CO emission standards and operational limitations as well as fuel requirements for ULSD.

For EU IDs MG-11, MG-12, and MG-19 through MG-22, the Permittee must comply with the installation and maintenance requirements and good air pollution control practices of 40 C.F.R. 63.6605 and/or 40 C.F.R. 63.6625(e) as well as the requirement to install a non-resettable hour meter in 40 C.F.R. 63.6625(f), if one is not already installed. To retain the designation of emergency engine under the NESHAP Subpart ZZZZ, EU IDs MG-11, MG-12, and MG-19 through MG-22 must not exceed non-emergency operations over 100 hours per calendar year. There is no limit on emergency operation. However, if the 100 hour limit is exceeded the Permittee must comply with the work practice and emission limitations under Subpart ZZZZ. The Permittee has designated EU IDs MG-11, MG-12, and MG-19 through MG-22 as emergency RICE. In accordance with 40 C.F.R. 63.6640(f)(1), if any of EU IDs MG-7 through MG-9, MG-11, MG-12, MG-14, MG-15, MG-19 through MG-22 fails to meet the requirements for “emergency RICE”, the Permittee shall operate the engine as non-emergency and comply with the corresponding requirements for non-emergency units under Subpart ZZZZ for the rest of the life of the permit term.

The Permittee must comply with the recordkeeping requirements of 40 C.F.R. 63.6655 and 40 C.F.R. 63.6660.

The Permittee must report any deviations from the operating limitations in Conditions 54 through 57.

For MG-1 through MG-6 and MG-13 through MG-18, an initial performance test or other initial compliance demonstration and the associated required test notifications and reports must be completed according to the deadlines and requirements of 40 C.F.R. 63.6610, 63.6612. Subsequent performance testing and compliance demonstration, test notification and reports must be completed in accordance with the requirements of 40 C.F.R. 63.6615.

Note: The Permittee identified EU IDs MG-10, MG-23, MG-24, MG-25, and MXG-101 as non-road engines. These engines are not subject to 40 C.F.R. 63, Subpart ZZZZ. Several other engines, including EU IDs MG-14, MG-15, and MG-16, were identified as portable emission units by the Permittee but the Red Dog Mine plans to keep the engines permitted as stationary emission units (i.e., not qualified as non-road engines) in the event the engines are used as stationary emission units.¹⁷ As such, the Department added the requirements of NESHAP Subpart ZZZZ, which applies to stationary reciprocating internal combustion engines, to the permit for EU IDs MG-14, MG-15 and MG-16.

Conditions 58 - 66, NESHAP Subpart DDDDD Requirements

Legal Basis: The provisions of 40 C.F.R. 63, Subpart DDDDD apply to owners or operators of an industrial, commercial, or institutional boiler or process heater as defined in 40 C.F.R. 63.7575 that is located at, or is part of, a major source of HAP. This stationary source is a major source of HAP emissions, and is subject to the provisions of NESHAP Subpart DDDDD under 40 C.F.R. 63.7490(a)(1) for existing ABCO Standby glycol/water heaters (EU IDs MH-1, MH-2, and MH-3) and the Emulsion Plant Boiler (EU ID MH-5), which are affected emission units because construction was commenced prior to June 4, 2010.

¹⁷ Email from Red Dog Mine to Jim Plosay of ADEC received on June 4, 2010.

Factual Basis: There is some ambiguity regarding process heaters EU IDs MH-1 through MH-3. *Process heater* as defined in the subpart at 40 C.F.R.63.7575 means “...an enclosed device using controlled flame that is not a boiler, and the unit’s primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not directly come into contact with process materials.

Process heaters do not include units used for comfort heat or space heat, [MH-1 – MH-3] food preparation for on-site consumption, or autoclaves.” As the units heat a mixture of glycol and water for the purposes of space and comfort heat, there exists the possibility that these units are not affected facilities under the rule. This notwithstanding, the Permittee desires to remove ambiguity by complying with the rule for these units as incorporated into this permit.

Therefore, pursuant to 40 C.F.R. 63.7490(a)(1), EU IDs MH-1, MH-2, MH-3 and MH-5 are affected stationary sources subject to NESHAP Subpart DDDDD and must comply with the requirements of this subpart no later than January 31, 2016 and must submit an Initial Notification not later than 120 days after January 31, 2013. EU IDs MH-1, MH-2, MH-3 and MH-5 burns light liquid fuel and is subject to work practice standards including initial tune-ups of the boilers. Subsequent tune ups are required biennially for EU IDs MH-1, MH-2, and MH-3 and every 5 years for MH-5 as specified in 40 C.F.R. 63.7540. The Permittee is required to maintain records and submit a biennial compliance report for EU IDs MH-1, MH-2, and MH-3, and submit 5-year compliance report for MH-5 instead of a semi-annual compliance report. The Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A as specified in the provisions for applicability of Subpart A in 40 C.F.R. 63, Subpart DDDDD Table 10.

Condition 67, Asbestos NESHAP

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

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

Condition 68, Protection of Stratospheric Ozone, 40 C.F.R. 82

Legal Basis: Condition 68.1 ensures compliance with the applicable requirement in 18 AAC 50.040(d) and applies if the Permittee engages in the recycling or disposal of certain refrigerants. The condition requires the Permittee to comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F that will apply if the Permittee uses certain refrigerants.

Conditions 68.2 and 68.3 prohibitions also apply to all stationary sources that use Halon for extinguishing fires and inert gas to reduce explosion risk. The condition prohibits the Permittee from causing or allowing violations of these prohibitions. The Red Dog Mine uses Halon and is therefore subject to the Federal regulations contained in 40 C.F.R. 82.

Factual Basis: Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with this Federal regulation. This condition also incorporates applicable 40 C.F.R. 82 requirements. The Permittee may not cause or allow violations of these prohibitions.

Condition 69, 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 a major HAPs stationary source based on emissions.

Condition 70, NSPS and NESHAP Reports

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

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

Conditions 71 - 73, Standard Terms and Conditions

Legal Basis: These are standard permit conditions required under 18 AAC 50.345(a) and (e)-(g) for all operating permits. This provision is incorporated in the federally approved Alaska operating permit program of November 30, 2001, as updated effective November 9, 2008.

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

Condition 74, Administration Fees

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.400-405 as derived from AS 46.14.130. This condition requires the Permittee, owner, or operator to pay administration fees as set out in regulation. Paying administration fees is required as part of obtaining and holding a permit with the Department or as a fee for a Department action.

Factual Basis: The owner or operator of a stationary source who is required to apply for a permit under AS 46.14.130 shall pay to the Department all assessed permit administration fees. The regulations in 18 AAC 50.400-405 specify the amount, payment period and the frequency of fees applicable to a permit action.

Conditions 75 - 76, Emission Fees

Legal Basis: These conditions ensure compliance with the applicable requirement in 18 AAC 50.410-420. The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These emission fee conditions are Standard Permit Condition I under 18 AAC 50.346(b) adopted pursuant to AS 46.14.010(e). The Department determined that these standard permit conditions adequately meet the requirements of AS 46.14.250. No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard permit condition as updated to correct the Department's mailing address meets the requirements of AS 46.14.250.

These standard permit conditions require the Permittee to pay fees in accordance with the Department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The assessable emissions are generally potential or projected emissions of each air pollutant authorized by the permit (AS 46.14.250(h)(1)).

The conditions allow the Permittee to calculate actual annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air pollutant. Therefore, fees based on actual emissions shall be paid on any pollutant emitted whether or not the permit contains any limitation of that pollutant.

These standard permit conditions specify that, unless otherwise approved by the Department, calculations of assessable emissions based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the Department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match.

Condition 77, Good Air Pollution Control Practice

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.346(b)(5) and applies to all emission units, except those subject to Federal emission standards, those subject to continuous emission or parametric monitoring and for insignificant emission units, i.e., EU ID MH-5 (Emulsion Plant Boiler) after the compliance date in Condition 58.

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

The Department adopted this condition under 18 AAC 50.346(b) as Standard operating Permit Condition VI pursuant to AS 46.14.010(e). EU ID MH-5 (Emulsion Plant Boiler) are subject to this condition only until the applicable compliance date as set forth in Condition 58 because on the compliance date in Condition 58, these units will no longer be subject to this condition (as these units are subject to Federal emission standards) and will instead be required to comply with Condition 54.1. The Department also added similar language to Condition 77 as pertains to EU ID MH-5 (Emulsion Plant Boiler). Records kept in accordance with Condition 77.1b for units previously subject to GAPCP need to be maintained for 5 years in accordance with Condition 96 even if a unit is no longer subject to this condition.

The Department determined that this standard permit condition adequately meets the requirements of 40 C.F.R. 71.6(a)(3). No emission unit or stationary source operational or compliance factors indicate that unit-specific or stationary-source specific conditions would better meet these requirements. Therefore, the Department concluded that the standard permit condition meets the requirements of 40 C.F.R. 71.6(a)(3).

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

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

Condition 78, Dilution

Legal Basis: This condition prohibits the Permittee from using dilution as an emission control strategy as set out in 18 AAC 50.045(a). This State regulation applies to the Permittee because the Permittee is subject to emission standards in 18 AAC 50.

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

Condition 79, Reasonable Precautions to Prevent Fugitive Dust

Legal Basis: This condition requires the Permittee to use reasonable precautions when handling, storing or transporting bulk materials or engaging in an industrial activity in accordance with the applicable requirement in 18 AAC 50.045(d). Bulk material handling requirements apply to the Permittee because the Permittee may engage in bulk material handling, transporting, or storing; or may engage in industrial activity at the stationary source.

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

The Department has also included in those requirements in Condition 79 a specific requirement to comply with the August 1999 approved Dust Control (PM Control) Plan and specific fugitive dust requirements from Construction Permit No. 9932-AC005 Rev. 2, and Minor Permit No. AQ0290MSS06 Rev. 1.

Condition 80, Stack Injection

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.045(e)-(f) and 18 AAC 50.055(g). It prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). Stack injection requirements apply to a stack or stationary source constructed or modified after November 1, 1982.

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

Condition 81, Air Pollution Prohibited

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.110. The condition prohibits the Permittee from causing any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property. Air Pollution Prohibited requirements apply to the stationary source because the stationary source will have emissions.

Factual Basis: While the other permit conditions and emissions limitations should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

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

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 83, Technology-Based Emission Standard

Legal Basis: The Permittee is required to take reasonable steps to minimize emissions if certain activity causes an exceedance of any technology-based emission standard in this permit. This condition ensures compliance with the applicable requirement in 18 AAC 50.235. Technology Based Emission Standard requirements apply to the stationary source because the stationary source contains equipment subject to a technology-based emission standard, such as BACT, MACT, LAER, NSPS or other “technologically feasible” determinations.

Factual Basis: The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with Condition 101. Excess emission reporting under Condition 101 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 100.

Condition 84, Open Burning

Legal Basis: The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the stationary source. This condition ensures compliance with the applicable requirement in 18 AAC 50.065. The open burning State regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the stationary source.

Factual Basis: The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the stationary source. The Permittee requested and has been allowed by the Department to conduct open burning and firefighter training under certain provisions. Specific requirements as pertains to open burning allowed at this stationary source are carried forward from previous Construction Permit No. 9332-AC005 Revision 2, as described in Conditions 84.1 and 84.9.

No specific monitoring is required for this condition. Condition 84.2f requires the Permittee to keep "sufficient records" to demonstrate compliance with the standards for conducting open burning, but does not specify what these records should contain.

More extensive monitoring and recordkeeping is not warranted because the Permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored. Compliance is demonstrated through annual certification required under Condition 103.

Condition 85, Requested Source Tests

Legal Basis: The Permittee is required to conduct source tests as requested by the Department. The Department adopted this condition under 18 AAC 50.345(k) as part of its operating permit program approved by EPA November 30, 2001.

Factual Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.220(a) and applies because this is a standard permit condition to be included in all operating permits. Monitoring consists of conducting the requested source test.

Conditions 86 - 89, Operating Conditions, Reference Test Methods, Excess Air Requirements

Legal Basis: These conditions ensure compliance with the applicable requirements in 18 AAC 50.220(b) and apply because the Permittee is required by this permit to conduct source tests. The Permittee is required to conduct source tests as set out in Conditions 86 through 88.

Factual Basis: These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with Conditions 86 through 88 consist of the test reports required by Condition 94.

Condition 90, Test Exemption

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

Factual Basis: As provided in 18 AAC 50.345(a), amended November 9, 2008, the requirements for test plans, notifications and reports do not apply to visible emissions observations by smoke readers, except in connection with required particulate matter testing.

Conditions 91 - 94, Test Deadline Extension, Test Plans, Notifications and Reports

Legal Basis: These conditions ensure compliance with the applicable requirement in 18 AAC 50.345(l)-(o) and apply because the Permittee is required to conduct source test by this permit.

Factual Basis: Standard permit conditions 18 AAC 50.345(l) - (o) are incorporated through these conditions. These standard permit conditions supplement specific monitoring requirements stated elsewhere in this permit. The source test itself monitors compliance with these conditions.

Condition 95, Particulate Matter (PM) Calculations

Legal Basis: This condition requires the Permittee to reduce particulate matter data in accord with 18 AAC 50.220(f). It applies when the Permittee tests for compliance with the PM standards in 18 AAC 50.050 or 50.055.

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

Condition 96, Recordkeeping Requirements

Legal Basis: Applies because the Permittee is required by the permit to keep records.

Factual Basis: The condition restates the regulatory requirements for recordkeeping and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide an evidence of compliance with this requirement.

Condition 97, Certification

Legal Basis: This condition requires the Permittee to comply with the certification requirement in 18 AAC 50.205 and applies to all Permittees under EPA's approved operating permit program of November 30, 2001.

Factual Basis: This standard permit condition is required in all operating permits under 18 AAC 50.345(j).

This condition requires the Permittee to certify any permit application, report, affirmation, or compliance certification submitted to the Department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be **certified** with the operating report, even though it must still be **submitted** more frequently than the operating report. This condition supplements the reporting requirements of this permit.

Condition 98, Submittals

Legal Basis: This condition requires the Permittee to comply with standardized reporting requirement in 18 AAC 50.326(j) and applies because the Permittee is required to send reports to the Department.

Factual Basis: This condition lists the Department's appropriate address for reports and written notices. The Permittee is required to submit an original and one copy of reports, compliance certifications, and other submittals required by this permit. Receipt of the submittal at the correct Department office is sufficient monitoring for this condition. This condition supplements the standard reporting and notification requirements of this permit.

Condition 99, Information Requests

Legal Basis: This condition requires the Permittee to submit requested information to the Department. This is a standard permit condition from 18 AAC 50.345(i) under the federally approved State operating permit program effective November 30, 2001.

Factual Basis: This condition requires the Permittee to submit information requested by the Department. Monitoring consists of receipt of the requested information.

Condition 100, Recording Devices Malfunctions on Non-operations

Legal Basis: This condition applies because this is an emission unit-specific reporting requirement carried forward from previous Operating Permit No. 9332-AA003.

Factual Basis: The condition provides specific reporting requirements to the Department that the Permittee has to fulfill in cases of malfunctions or non-operation of recording devices used to monitor operations of sources subject to air quality standards or limits. The reports themselves provide monitoring for compliance with this condition.

Condition 101, Excess Emission and Permit Deviation Reports

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

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

The Department adopted this condition as Standard Permit Condition III under 18 AAC 50.346(c) pursuant to AS 46.14.010(e). The Department has determined that the standard permit condition adequately meets the requirements of 40 C.F.R. 71.6(a)(3). No additional emission 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 permit condition meets the requirements of 40 C.F.R. 71.6(a)(3).

Section 14, Notification Form

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

Condition 102, Operating Reports

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

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

The Department used the Standard Permit Condition VII as adopted into regulation on August 20, 2008 pursuant to AS 46.14.010(e). The Department has determined that the standard conditions adequately meet the requirements of 40 C.F.R. 71.6(a)(3). No additional emission unit or stationary source operational or compliance factors indicate the unit-specific or stationary-source-specific conditions would better meet the requirements. Therefore, the Department concludes that the standard condition meets the requirements of 40 C.F.R. 71.6(a)(3).

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

Condition 103, Annual Compliance Certification

Legal Basis: This condition ensures compliance with the applicable requirement in 18 AAC 50.040(j)(4) and applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements and specifies a due date for the annual compliance certification. Each annual certification provides monitoring records for compliance with this condition.

Condition 103.2 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 original and one copy of an annual compliance certification report. The Permittee may submit one of the required copies electronically at their discretion. This change more adequately meets the requirements of 18 AAC 50 and agency needs, as the Department can more efficiently distribute the electronic copy to staff in other locations.

Condition 104, Emission Inventory Reporting

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

Factual Basis: The Department has incorporated Standard Permit Conditions XV and XVI as adopted by regulation on September 27, 2010. The Department adopted these conditions under 18 AAC 50.346(b) pursuant to AS 46.14.010(e). The emission inventory data is due to EPA 12 months after the end of the reporting year (40 C.F.R. 51.30(a)(1) and (b)(1), 12/17/08). A due date of March 31 corresponds with sources reporting actual emissions for assessable emissions purposes and provides the Department sufficient time to enter the data into EPA's electronic reporting system.

The air emissions reporting requirements under 40 C.F.R. Part 51 Subpart A apply to States; however, States rely on information provided by point sources to meet the reporting requirements of Part 51 Subpart A.

To ensure that the Department's electronic system reports complete information to the National Emissions Inventory, Title V stationary sources classified as Type A in Table 1 of Appendix A to Subpart A of 40 C.F.R. 51 are required to submit with each annual report all the data elements required for the Type B source triennial reports (see also Table 2A of Appendix A to Subpart A of 40 C.F.R. Part 51). All Type A sources are also classified as Type B sources. However, the Department has streamlined the reporting requirements so this Type A source only needs to submit a single type of report every year instead of both an annual report and a separate triennial report every third year. Other than streamlining the non-applicable standard permit condition text to remove obligations that are not applicable, no other text of the standard permit condition has been changed.

The condition requires reporting of all emissions from *point sources* as defined in 40 C.F.R. 51.20(b) which means *large, stationary (nonmobile), identifiable sources of emissions that release pollutants into the atmosphere*. Pursuant to the definition, non-mobile sources (defined as: *mobile source* means a motor vehicle, nonroad engine or nonroad vehicle) excludes emissions from non-road engines and EU categories comprised of temporary sources that may be part of mobile equipment (defined as: A *nonroad vehicle* is a vehicle that is run by a nonroad engine and that is not a motor vehicle or a vehicle used solely for competition) such as drilling rigs and their associated non-road engines, temporary heaters and boilers.

Condition 105, Permit Applications and Submittals

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

Factual Basis: Standard Permit Condition XIV directs the applicant to send copies of all application materials required to be submitted to the Department directly to the EPA, in electronic format if practicable. This condition shifts the burden of compliance from the Department to ensure that copies of application materials are submitted to EPA by transferring that responsibility to the Permittee as allowed under 40 C.F.R. 71.10(d)(1).

Conditions 106 - 108, Permit Changes and Revisions Requirements

Legal Basis: The Permittee is obligated to notify the Department of certain off-permit source changes and operational changes under 18 AAC 50.326(j)(4). 40 C.F.R. 71.6(a)(10), (12) and (13) incorporated by reference under 18 AAC 50.040(j) require these provisions within this permit. 40 C.F.R. 70, Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001.

Factual Basis: These are conditions required in 40 C.F.R. 71.6 for all operating permits to allow changes within a permitted stationary source without requiring a permit revision.

The Permittee did not request trading of emission increases and decreases as described in 40 C.F.R. 71.6(a)(13)(iii); therefore, language addressing these provisions has not been included in this permit as part of Condition 106.

Condition 109, Permit Renewal

Legal Basis: The Permittee must submit a timely and complete operating permit renewal application if the Permittee intends to continue source operations in accord with the operating permit program under 18 AAC 50.326(j)(3). The obligations for a timely and complete operating permit application are set out in 40 C.F.R. 71.5 incorporated by reference in 18 AAC 50.040(j)(3). 40 C.F.R. 70, Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001.

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

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

Conditions 110 - 114, General Compliance Requirements and Schedule

Legal Basis: These conditions ensure compliance with the applicable requirement in 18 AAC 50.326(j)(3) and 40 C.F.R. 71.6(c). The Permittee is required to comply with these standard permit conditions set out in 18 AAC 50.345 included in all operating permits. 40 C.F.R. 70 Appendix A documents that EPA fully approved the Alaska operating permit program effective November 30, 2001.

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

Conditions 115 - 116, Permit Shield

Legal Basis: These conditions ensure compliance with the applicable requirement in 18 AAC 50.326(j) and apply because the Permittee has requested that the Department shield the source from the non-applicable requirements listed under these conditions under the Federally approved State operating program effective November 30, 2001.

Factual Basis: Table D of Operating Permit No. AQ0290TVP02 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. The following table shows the requests that were denied and the reasons that they were denied. The Department based the determinations on the permit application, past operating permit, likelihood for the source to become subject during the life of the permit, Title I permits and inspection reports.

Table O - Permit Shield Requests Denied

Shield requested for:	Reason for shield request:	Reason for request denial:
Emission units subject to NSPS	Notification and recordkeeping requirements in 40 C.F.R. 60, Subpart A have been satisfied	Satisfaction of these requirements does not make them non-applicable.
Emission units subject to NSPS	The source testing requirement in 40 C.F.R. 60.8	Satisfaction of these requirements does not make them non-applicable.
Source wide	Non-applicability of Asbestos NESHAP because no activities occur	Asbestos renovation, demolition and disposal activities occur at this source.
Source wide	40 C.F.R. 82, Subparts B and F	These subparts are effective for all freon containing equipment.
Source wide	18 AAC 50.080 - Ice Fog Standards	The Arctic is an area of potential ice fog.
MD-4	18 AAC 50.055 – Industrial process	Grinding, which is an industrial process, occurs in the Assay lab.