Statement of Basis

Permit to Construct No. P-2013.0046
Project ID 61244

Nu-West Industries, Inc. (dba Agrium) Lanes Creek Mine
Caribou County, Idaho

Facility ID 029-00041

Final

June 25, 2014
Morrie Lewis
Permit Writer

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01.et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
BHP	brake horsepower
Btu	British thermal units
CAA	Clean Air Act
CEMS	continuous emission monitoring systems
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CI	compression ignition
CID/cyl	cubic inches of engine displacement per cylinder
CMS	continuous monitoring systems
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent emissions
COMS	continuous opacity monitoring systems
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gases
gph	gallons per hour
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hr/yr	hours per consecutive 12 calendar month period
ICE	internal combustion engines
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometers
L/cyl	liters of engine displacement per cylinder
lb/hr	pounds per hour
lb/qtr	pound per quarter
m	meters
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NSPS	New Source Performance Standards
O_2	oxygen
PM	particulate matter
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
RICE	reciprocating internal combustion engines

Rules	*Rules for the Control of Air Pollution in Idaho*
scf	standard cubic feet
SCL	significant contribution limits
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_x	sulfur oxides
T/yr	tons per consecutive 12 calendar month period
TAP	toxic air pollutants
U.S.C.	United States Code
VOC	volatile organic compounds
$\mu g/m^3$	micrograms per cubic meter

FACILITY INFORMATION

Description

Operations at the Lanes Creek Mine facility include open-pit mining, which includes drilling, blasting, loading, and hauling of ore and overburden material; and stockpiling of ore, growth media and overburden material. Secondary processes include diesel-fired generators and diesel fuel storage.

Permitting History

This is the initial permit to construct, thus there is no permitting history.

Application Scope

This is an initial permit to construct an open-pit phosphate ore mining facility.

Application Chronology

July 25, 2013	DEQ received an application and an application fee.
August 8 – 23, 2013	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
August 22, 2013	DEQ received a request for a public comment period.
August 23, 2013	DEQ determined that the application was incomplete.
October 30, 2013	DEQ received updates to the modeling protocol.
November 5, 2013	DEQ received updates to ore-related TAP emission inventory methodology.
November 20, 2013	DEQ received updates to ore-related TAP emission factors.
January 13, 2014	DEQ received revised modeling demonstrations.
January 30, 2014	DEQ determined that the application was complete.
February 19, 2014	DEQ made available the draft permit and statement of basis for peer and regional office review.
March 28, 2014	DEQ made available the draft permit and statement of basis for applicant review.
April 15, 2014	DEQ received the permit processing fee.
May 15 – June 16, 2014	DEQ provided a public comment period on the proposed action.
June 5, 2014	DEQ received a comment concerning the proposed project (2014AAG1108; see Appendix E – Public Comments).
June 25, 2014	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Table 1 Emissions Unit and Control Equipment Information

Permit Section	Regulated Sources	Control Equipment
2	Drilling, blasting, mining, material transfer, loading, unloading, hauling, and storage pile operations	Reasonable controls
2	(2) Generator Engines, or equivalent [a] Date of construction: 2013 Model year: 2012 Maximum capacity: 198 BHP Maximum operation: 8,760 hr/yr Fuel: diesel Maximum fuel consumption: 7.3 gph Maximum displacement: 6.7 L/cyl	EPA Tier 3 technologies
2	(9) Light Plant Generator Engines, or equivalent [a] Date of construction: 2013 Model year: 2012 Maximum capacity: 14 BHP Maximum operation: 8,760 hr/yr Fuel: diesel Maximum fuel consumption: 0.44 gph Maximum displacement: 56-68 CID/cyl (0.91-1.12 L/cyl)	EPA Tier 2 technologies
2	Above-ground fuel storage tank Maximum capacity: 20,000 gal Fuel: diesel	Lids or other appropriate closure

(a) "equivalent" is defined as a generator engine which has an equivalent or less maximum capacity (BHP) and fuel consumption (gph) than listed in this table; which does not result in an increase in emissions; and which does not result in the emission of a toxic air pollutant not previously emitted.

Emission Inventories

Emission inventories were provided in the application, including the emissions of federally-regulated criteria pollutants, greenhouse gases (GHG), hazardous air pollutants (HAP), and state-regulated toxic air pollutants (TAP). The emission inventories have been reviewed by DEQ and appear to accurately reflect potential emissions from the facility.

Facility-Wide Potential to Emit

IDAPA 58.01.01 defines potential to emit as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air 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 state or federally enforceable. Particulate emission estimates from drilling, blasting, mining, material transfer, loading, unloading, hauling, and storage pile operations assume the use of reasonable controls (Permit Condition 2.3) and production limits (Permit Condition 2.9).

Combustion emissions (criteria, GHG, HAP, and TAP) from the diesel-fired generators were estimated using AP-42 Section 3.3 emission factors[1] for diesel combustion and manufacturer's certified emissions data (Tier 3 and Tier 2), and assuming maximum allowable operation at the maximum rated design capacity (as summarized in Table 1). Particulate emissions from drilling, blasting, mining, material transfer, loading, unloading, hauling, and storage pile operations were estimated using emission factors from various sections in AP-42 (including Sections 11.9, 11.19, 11.24, 13.2, and 13.3)[2] and assuming continuous operation at the maximum production rate (Permit Condition 2.9). Particulate TAP and HAP metal emissions from these operations were estimated based on estimated concentrations and measured values in similar materials.[3,4,5] Emissions of $PM_{2.5}$ were estimated to be equivalent to emissions of PM_{10}.

Estimated emissions increases of TAP were below applicable screening emissions levels (EL), with the exception of arsenic, cadmium, iron, and nickel; and also benzene, 1,3-butadiene, fluorene, formaldehyde, naphthalene, phenanthrene, and polycyclic organic matter (POM). Benzene, 1,3-butadiene, fluorene, formaldehyde, naphthalene, phenanthrene, and POM emissions from the generator engines and the light plant generator engines are regulated under New Source Performance Standards (NSPS), Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines; therefore no further preconstruction TAP compliance demonstration were required in accordance with IDAPA 58.01.01.210.20. Estimated emission increases of the remaining TAP that exceeded applicable EL were modeled to demonstrate preconstruction compliance with applicable acceptable ambient concentrations (AAC); refer to the Ambient Air Quality Impact Analyses section and the memorandum provided in Appendix D – Ambient Air Quality Impact Analyses for additional information concerning the modeling analyses.

Potential emissions of HAP were not estimated to exceed major source thresholds of 10 tons per year for any individual HAP and below 25 tons per year for any combination of HAP.

A summary of the estimated emission increases of criteria, GHG, HAP, and TAP emissions is provided in Appendix C – Emission Inventories.

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1 Compilation of Air Pollutant Emission Factors, AP-42, Volume I, Fifth Edition (AP-42), Tables 3.3-1 and 3.3-2 in Section 3.3 – Gasoline and Diesel Industrial Engines, Office of Air Quality Planning and Standards Office of Air and Radiation (OAQPS), EPA, October 1996.

2 AP-42, OAQS EPA; Tables 11.9-1 and 11.9-4 (10/98), Table 11.19.2-1 in Section 11.19.2 (8/04), Table 11.24-2 in Section 11.24 (8/82), Tables 13.2.2 and 13.2.2-1 in Section 13.2 (11/06), Table 13.3-1 in Section 13.3 (2/80).

3 Whetstone Associates, Inc., 2012, Final Baseline Geochemical Characterization Study Plan, Rasmussen Valley Mine Project, U.S. Department of Interior, Bureau of Land Management, Idaho Falls District, Pocatello Field Office (preliminary geochemical data summary).

4 Herring, J.R., and R.I. Grauch. 2004. Lithogeochemistry of the Meade Peak Phosphatic Shale Member of the Phosphoria Formation, Southeast Idaho. pp. 321-366 in Life Cycle of the Phosphoria Formation: From Deposition to Post-Mining Environment, ed. J. R. Hein, Vol. 8 of Handbook of Exploration and Environmental Geochemistry, ed. M. Hall Elsevier B.V., Amsterdam.

5 Rader, L.F., and Grimaldi, F.S., 1961, Chemical Analyses for Selected Minor Elements in Pierre Shale, Geological Survey Professional Paper 391-A, U.S. Govt. Printing Office, Washington, 1961, p. 51.

Ambient Air Quality Impact Analyses

The applicant has demonstrated pre-construction compliance to DEQ's satisfaction that emissions from this facility will not cause nor significantly contribute to a violation of any ambient air quality standard. The applicant has also demonstrated pre-construction compliance to DEQ's satisfaction that the emissions increase due to this permitting action will not exceed any applicable acceptable ambient concentration (AAC) or acceptable ambient concentration for carcinogens (AACC) for toxic air pollutants (TAP). A summary of ambient air impact analyses is provided in Appendix D – Ambient Air Quality Impact Analyses.

Estimated emissions from regulated sources exceeded published modeling thresholds[6] for criteria pollutants $PM_{2.5}$, PM_{10}, CO, NO_x, and SO_2. A full impact analysis of these pollutants was performed, and the maximum predicted impacts are provided in Appendix D – Ambient Air Quality Impact Analyses.

Estimated emission increases of the TAP that exceeded applicable EL (and are not regulated under Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines) were modeled to demonstrate preconstruction compliance with applicable AAC in accordance with IDAPA 58.01.01.210.03. The maximum predicted impacts are provided in Appendix D – Ambient Air Quality Impact Analyses. The estimated emissions increases of TAP that did not exceed applicable EL demonstrated preconstruction compliance with TAP standards in accordance with IDAPA 58.01.01.210.05 for uncontrolled average emission rates, and in accordance with IDAPA 58.01.01.210.08 for controlled average emission rates. Modeling analyses conducted in the development of TAP rules indicates that if a controlled average emission rate is below the applicable EL, controlled ambient concentrations are expected to be below the applicable acceptable ambient concentration.

An annual production limit (Permit Condition 2.9) was established as a permit condition to limit fugitive TAP emissions from drilling, blasting, mining, material transfer, loading, unloading, hauling, and storage pile operations pursuant to IDAPA 58.01.01.210.08.c. Use of reasonable controls (Permit Condition 2.3) and production limits (Permit Condition 2.9) were also established as permit conditions to ensure compliance with annual and short-term National Ambient Air Quality Standards (NAAQS) for particulate emissions ($PM_{2.5}$ and PM_{10}) in accordance with IDAPA 58.01.01.107.03.b.

An ambient air quality impact analyses document has been crafted by DEQ based on a review of the modeling analysis submitted in the application. That document is part of the final permit package for this permitting action (see Appendix C – Emission Inventories).

[6] Table 1, State of Idaho Air Quality Modeling Guideline, Doc ID AQ-011, rev. 1, December 31, 2002 and IDAPA 58.01.01.585-586.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Caribou County, which is designated as attainment or unclassifiable for $PM_{2.5}$, PM_{10}, SO_2, NO_2, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Permit to Construct (IDAPA 58.01.01.201)

A permit to construct was requested by the applicant (refer to the Application Chronology section), and this permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

The facility is classified as a natural minor facility because without limits on the potential to emit, the estimated emissions of criteria pollutant and HAP do not have the potential to exceed major source thresholds. The facility is not classified as a major facility as defined in IDAPA 58.01.01.008.10, and is not a designated facility as defined in IDAPA 58.01.01.006.30.

Post-project facility-wide emissions do not have the potential to emit greater than 100 tons per year for criteria pollutants, 10 tons per year for any one HAP, nor 25 tons per year for all HAP combined (refer to the Emission Inventories section). Therefore, the facility was not determined to meet the definition of Tier I source in accordance with IDAPA 58.01.01.006, and the requirements of IDAPA 58.01.01.301 were not determined to be applicable.

GHG have not been considered regulated air pollutants with respect to the facility under the Title V and PSD programs as provided in 40 CFR 52.21(b)(49) and IDAPA 58.01.01.006.97.d, because the facility has not undertaken a physical change or change in the method of operation that will result in an emissions increase of 75,000 T/yr CO_2e or more (refer to the Emission Inventories section).

PSD Classification (40 CFR 52.21)

The facility does not meet the definition of major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore, in accordance with 40 CFR 52.21(a)(2), PSD requirements were not determined to be applicable. The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

GHG have not been considered regulated air pollutants with respect to the facility under the Title V and PSD programs as provided in 40 CFR 52.21(b)(49) and IDAPA 58.01.01.006.97.d, because the facility has not undertaken a physical change or change in the method of operation that will result in an emissions increase of 75,000 T/yr CO_2e or more (refer to the Emission Inventories section).

NSPS Applicability (40 CFR 60)

The facility is subject to 40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE), and Subpart A – General Provisions.

The Generator Engines and the Light Plant Generator Engines are affected sources (CI ICE) subject to 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, because the construction dates of the CI ICE were after June 12, 2006.

Refer to Table 1 for dates of manufacture for each emissions unit.

NSPS Subpart IIII

40 CFR 60, Subpart IIII ..... Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

40 CFR 60.4200 ..... Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines,

(ii) The model year listed in table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are:

(i) Manufactured after April 1, 2006 and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

Because commencement of construction (the date the engine is ordered) of the CI ICE has been proposed after July 11, 2005, and manufactured after April 1, 2006, the requirements of this subpart (including §60.4208) are applicable to the permittee.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

Because the CI ICE proposed have not been proposed to be operated at a stationary CI ICE test cell/stand, and because the permittee will be required to obtain a permit for a reason other than the area source status of the stationary CI ICE (refer to the Regulatory Analysis section for additional applicability information), the requirements of §60.4200(b) through (c) are not applicable.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

§60.4200(d) contains an elective compliance exemption option which was not included as a permit condition. The permittee has not requested or qualified for this exemption option as part of this project.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

§60.4200(e) contains an elective compliance exemption option addressing when portable or transportable engines are regulated under nonroad engine requirements.

Although not specified in the permit, it should be understood that when engines are regulated under nonroad rather than stationary source requirements, such engines are subject to and required to comply with nonroad engine requirements, including meeting the applicable requirements of 40 CFR 89, 94, and/or 1068.

Permit Conditions 3.7 and 3.8 include requirements related to nonroad engine operation.

Nonroad engines are a category of units/equipment that are excluded from the definition of "stationary source" under the Clean Air Act Section 302(z), and exempt from federal stationary source (NSPS Subpart IIII) permitting requirements.[7] For this reason, explicit nonroad engine requirements were not incorporated into the permit. Although not specified in the permit, it should be understood that when engines are regulated under nonroad rather than stationary source requirements, such engines are subject to and required to comply with nonroad engine requirements, including meeting the applicable requirements of 40 CFR 89, 94, and/or 1068.

40 CFR 60.4201 ..... *What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?*

Because the permittee has not proposed to manufacture stationary CI ICE, the requirements of §60.4201 are not applicable to the permittee as a manufacturer and were not included as a permit condition. However, in accordance with §60.4204, as an owner or operator the permittee must comply with the applicable emission standards for new nonroad CI engines, as discussed below (with respect to §60.4204):

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

[7] U.S. EPA Region IX "Response to March 12, 2001 Communities for Land, Air, Water and Species Comments on California's Title V Program," Jack P. Broadbent, EPA Region IX, December 14, 2001 (refer to "Our Response to Comment #12").

Table 1 to 40 CFR 89.112–Emission Standards (g/kW-hr)

Rated Power (kW)	*Tier*	*Model Year*[1]	*NO_X*	*HC*	*NMHC + NO_X*	*CO*	*PM*
kW<8	*Tier 1*	*2000*	—	—	*10.5*	*8.0*	*1.0*
	Tier 2	*2005*	—	—	*7.5*	*8.0*	*0.80*
8≤kW<19	*Tier 1*	*2000*	—	—	*9.5*	*6.6*	*0.80*
	Tier 2	***2005***	—	—	***7.5***	***6.6***	***0.80***
19≤kW<37	*Tier 1*	*1999*	—	—	*9.5*	*5.5*	*0.80*
	Tier 2	*2004*	—	—	*7.5*	*5.5*	*0.60*
37≤kW<75	*Tier 1*	*1998*	*9.2*	—	—	—	—
	Tier 2	*2004*	—	—	*7.5*	*5.0*	*0.40*
	Tier 3	*2008*	—	—	*4.7*	*5.0*	
75≤kW<130	*Tier 1*	*1997*	*9.2*	—	—	—	—
	Tier 2	*2003*	—	—	*6.6*	*5.0*	*0.30*
	Tier 3	*2007*	—	—	*4.0*	*5.0*	
130≤kW<225	*Tier 1*	*1996*	*9.2*	*1.3*	—	*11.4*	*0.54*
	Tier 2	*2003*	—	—	*6.6*	*3.5*	***0.20***
	Tier 3	***2006***	—	—	***4.0***	***3.5***	
225≤kW<450	*Tier 1*	*1996*	*9.2*	*1.3*	—	*11.4*	*0.54*
	Tier 2	*2001*	—	—	*6.4*	*3.5*	*0.20*
	Tier 3	*2006*	—	—	*4.0*	*3.5*	
450≤kW≤560	*Tier 1*	*1996*	*9.2*	*1.3*	—	*11.4*	*0.54*
	Tier 2	*2002*	—	—	*6.4*	*3.5*	*0.20*
	Tier 3	*2006*	—	—	*4.0*	*3.5*	
kW>560	*Tier 1*	*2000*	*9.2*	*1.3*	—	*11.4*	*0.54*
	Tier 2	*2006*	—	—	*6.4*	*3.5*	*0.20*

[1] The model years listed indicate the model years for which the specified tier of standards takes effect.

- *In accordance with 40 CFR 89.113(a), exhaust opacity from compression-ignition nonroad engines shall not exceed:*
  - *20 percent during the acceleration mode;*
  - *15 percent during the lugging mode; and*
  - *50 percent during the peaks in either the acceleration or lugging modes.*

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 1 to 40 CFR 1042.1 identifies 40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the Federal Aid Highway System (FAHS); and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

Because the proposed CI ICE are 2007 model year or later and with maximum engine power within the ranges 8≤kW<19 and 130≤kW<225 kW, with a displacement of less than 10 liters per cylinder (6.7 and 0.91-1.12 L/cyl), the applicable emission standards are Tier 2 and Tier 3 (respectively), as provided in §60.4201(a).

§60.4201(a) incorporates applicable certification emission standards from 40 CFR parts 89 and 1039 by reference. Permit Condition 3.1 includes the requirements of this section.

40 CFR 60.4202 ..... What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

Because the permittee has not proposed to manufacture stationary CI ICE, the requirements of §60.4202 are not applicable and were not included as a permit condition.

40 CFR 60.4203 ..... How long must my engines meet the emission standards if I am a stationary CI internal combustion engine manufacturer?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the useful life of the engines.

Because the permittee has not proposed to manufacture stationary CI ICE, the requirements of §60.4203 are not applicable and were not included as a permit condition.

40 CFR 60.4204 ..... What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) 45 · n−0.2 g/KW-hr (34 · n−0.2 g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) 44 · n−0.23 g/KW-hr (33 · n−0.23 g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) 9.0 · n−0.20 g/KW-hr (6.7 · n−0.20 g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in §60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

Because the proposed CI ICE are non-emergency with a displacement of less than 30 L/cyl, and are model year 2007 or later, the requirements of §60.4204(b) are applicable, and §60.4204 (d) and (e) may become applicable.

Permit Conditions 3.1 and 3.6 include applicable requirements from this section.

40 CFR 60.4205 ..... What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

Because the stationary CI ICE have not been proposed only for operation during emergency situations, the requirements of §60.4205 are not applicable and were not included as a permit condition.

40 CFR 60.4206 ..... How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

Permit Condition 3.3 includes the requirements of this section.

40 CFR 60.4207 ..... What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

- In accordance with 40 CFR 80.510(b), all NR and LM diesel fuel is subject to the following per-gallon standards:

  (1) Sulfur content.

  (i) 15 ppm maximum for NR diesel fuel.

  (2) Cetane index or aromatic content, as follows:

  (i) A minimum cetane index of 40; or

  (ii) A maximum aromatic content of 35 volume percent.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are no longer subject to the requirements of paragraph (a) of this section, and must use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

Permit Condition 3.5 includes applicable requirements from this section. Because the applicable fuel requirements of 40 CFR 80.510(b) are more stringent than 40 CFR 80.510(a), the standards of 40 CFR 80.510(a) were referenced but not included in this permit condition.

40 CFR 60.4208 ..... What is the deadline for importing or installing stationary CI ICE produced in the previous model year?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 kW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 kW (25 HP) and less than 56 kW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 kW (75 HP) and less than 130 kW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 kW (175 HP), including those above 560 kW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 kW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (f) of this section after the dates specified in paragraphs (a) through (g) of this section.

(i) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

Because installation of non-compliant engines has not been proposed by the applicant, applicable requirements of this section were not included as a permit condition.

40 CFR 60.4209 ..... What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

Permit Condition 3.4 includes applicable requirements from this section.

40 CFR 60.4210 ..... What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

Because the permittee has not proposed to manufacture stationary CI ICE, the requirements of §60.4210 are not applicable and were not included as a permit condition.

40 CFR 60.4211 ..... What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

...

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

...

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(e) or §60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4204(e) or §60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4212 or §60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

...

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

§60.4211(a) incorporates applicable requirements from 40 CFR parts 89, 94, and 1068 by reference. Permit Conditions 3.1 and 3.2 reference and include applicable requirements from this section.

40 CFR 60.4212 ..... What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

NTE requirement for each pollutant = (1.25) x (STD) *(Eq. 1)*

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

§60.4212(a) through (d) contain applicable performance testing methodologies which were referenced but not included as a permit condition. In accordance with the permit general provisions, the permittee is encouraged to submit performance test protocol to DEQ for approval prior to any performance testing.

Permit Condition 3.6 includes the requirements of this section.

40 CFR 60.4213 ..... What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Because the permittee has not proposed the use of a stationary CI ICE with a displacement of greater than or equal to 30 L/cylinder, the requirements of §60.4213 are not applicable and were not included as a permit condition.

40 CFR 60.4214 ..... What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 kW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 kW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

Because the permittee has not proposed the use of the stationary CI ICE for non-emergency purposes, the requirements of §60.4214 are not applicable and were not included as a permit condition.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, 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.

Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	*Starting model year*
19≤kW<56 (25≤HP<75)	*2013*
56≤kW<130 (75≤HP<175)	*2012*
kW≥130 (HP≥175)	*2011*

Because the stationary CI ICE were proposed as model year 2009, the requirements of §60.4214(b) are not applicable and were not included as a permit condition.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

40 CFR 60.4215 ..... What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

Because the facility will not be located in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands, the requirements of §60.4215 are not applicable and were not included as a permit condition.

40 CFR 60.4216 ..... What requirements must I meet for engines used in Alaska?

Because the facility will not be located in Alaska, the requirements of §60.4215 are not applicable and were not included as a permit condition.

40 CFR 60.4217 ..... What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

(a) Owners and operators of stationary CI ICE that do not use diesel fuel, or who have been given authority by the Administrator under §60.4207(d) of this subpart to use fuels that do not meet the fuel requirements of paragraphs (a) and (b) of §60.4207, may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4202 or §60.4203 using such fuels.

(b) [Reserved]

§60.4217 contains alternative compliance options for special fuels which require approval and which were not included as a permit condition.

40 CFR 60.4218 ..... What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	*Subject of citation*	*Applies to subpart*	*Explanation*
§60.1	*General applicability of the General Provisions*	*Yes*	
§60.2	*Definitions*	*Yes*	*Additional terms defined in §60.4219.*
§60.3	*Units and abbreviations*	*Yes*	
§60.4	*Address*	*Yes*	
§60.5	*Determination of construction or modification*	*Yes*	
§60.6	*Review of plans*	*Yes*	
§60.7	*Notification and Recordkeeping*	*Yes*	*Except that §60.7 only applies as specified in §60.4214(a).*
§60.8	*Performance tests*	*Yes*	*Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.*
§60.9	*Availability of information*	*Yes*	
§60.10	*State Authority*	*Yes*	
§60.11	*Compliance with standards and maintenance requirements*	*No*	*Requirements are specified in subpart IIII.*
§60.12	*Circumvention*	*Yes*	
§60.13	*Monitoring requirements*	*Yes*	*Except that §60.13 only applies to stationary CI ICE with a displacement of ≥30 liters per cylinder.*
§60.14	*Modification*	*Yes*	
§60.15	*Reconstruction*	*Yes*	
§60.16	*Priority list*	*Yes*	
§60.17	*Incorporations by reference*	*Yes*	
§60.18	*General control device requirements*	*No*	
§60.19	*General notification and reporting requirements*	*Yes*	

§60.4218 contains a table identifying applicable and non-applicable general provisions. This table was referenced but not included as a permit condition.

Permit Condition 3.9 includes the requirements of this section.

40 CFR 60.4219..... What definitions apply to this subpart?

§60.4219 contains applicable definitions which were not included as a permit condition.

NSPS Subpart A

40 CFR 60, Subpart A ..... General Provisions

40 CFR 60.1 ..... Applicability.

(a) Except as provided in subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

(b) Any new or revised standard of performance promulgated pursuant to section 111(b) of the Act shall apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of such new or revised standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

Because the proposed facility contains affected facilities (the generator engines and the light plant generator engines) which have been proposed to commence construction after the date of publication of the relevant applicable NSPS standards (Subpart IIII), the general provisions in Subpart A are applicable.

Permit Condition 3.9 summarizes applicable requirements from 40 CFR 60, Subpart A.

NESHAP Applicability (40 CFR 61)

The facility and emission sources are not subject to NESHAP requirements in 40 CFR 61.

MACT Applicability (40 CFR 63)

The generators are new stationary reciprocating internal combustion engines (RICE) sources subject to 40 CFR 63, Subpart ZZZZ.

In accordance with 40 CFR 63.6590(c)(1), because these sources are subject to regulation under 40 CFR 60, Subpart IIII, and they commenced construction after June 12, 2006, no further requirements are applicable under 40 CFR 63, Subpart ZZZZ. Refer to Table 1 for the manufacture dates of each emissions unit.

Subpart ZZZZ

40 CFR 63, Subpart ZZZZ ..... National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR 63.6580 ..... What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

40 CFR 63.6585 ..... Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary 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.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

Because the permittee has proposed to operate the generator engines and the light plant generator engines at an area source of HAP emissions (the facility is not major for HAP emissions), the permittee is subject to this subpart.

§63.6585(e) contains elective compliance exemption options which may require approval and which were not included as a permit condition.

40 CFR 63.6590 ..... What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) Affected source. An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) Existing stationary RICE.

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) New stationary RICE. (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) Reconstructed stationary RICE. (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) Stationary RICE subject to limited requirements. (1) An affected source which meets either of the criteria in paragraph (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(h).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; or

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(h) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) A stationary RICE which is an existing spark ignition 4 stroke rich burn (4SRB) stationary RICE located at an area source of HAP emissions; an existing spark ignition 4SRB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions; an existing spark ignition 2 stroke lean burn (2SLB) stationary RICE; an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE; an existing compression ignition emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; an existing spark ignition emergency or limited use stationary RICE; an existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; or an existing stationary residential, commercial, or institutional emergency stationary RICE located at an area source of HAP emissions, does not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary.

(c) Stationary RICE subject to Regulations under 40 CFR part 60. An affected source that is a new or reconstructed stationary RICE located at an area source, or is a new or reconstructed stationary RICE located at a major source of HAP emissions and is a spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of less than 500 brake HP, a spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of less than 250 brake HP, or a 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP, must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

The stationary RICE were classified as new affected sources, because the generator engines and light plant generator engines have been proposed to commence construction on or after June 12, 2006 (2009). Because the proposed stationary RICE have been proposed at an area source, and subject to regulations under 40 CFR 60, Subpart IIII, no further requirements apply for the generator engines and light plant generator engines under 40 CFR 63, Subpart ZZZZ.

Permit Conditions Review

This section describes the permit conditions for this initial permit.

Permit Conditions 2.1 – 2.2

Permit Condition 2.1 incorporates visible emissions limits in accordance with IDAPA 58.01.01.625.

Monitoring, recordkeeping, and reporting requirements (MRRR) include the following (Permit Condition 2.2):

- Inspect any potential sources of visible emissions monthly.
- Take corrective action when appropriate (and/or complete Method 9).
- Maintain records of inspection, opacity tests, and corrective actions.
- Report exceedances.

Permit Condition 2.3 and 2.4 – 2.7

This permit condition incorporates fugitive dust emission limits in accordance with IDAPA 58.01.01.650-651.

Monitoring, recordkeeping, and reporting requirements (MRRR) include the following (Permit Conditions 2.4 – 2.7):

- Inspect any potential sources of visible emissions monthly.
- Take corrective action when appropriate (and/or complete Method 9).
- Maintain records of inspection, opacity tests, and corrective actions.
- Report exceedances.

Permit Conditions 2.8 – 2.10

These permit conditions incorporate particulate matter emission limits (Permit Condition 2.8) and establish production limits (Permit Condition 2.9) for process and process equipment to ensure compliance with IDAPA 58.01.01.210.08.c (TAP), IDAPA 58.01.01.107.03.b (NAAQS), and IDAPA 58.01.01.700-703.

MRRR include the following (Permit Condition 2.10):

- Monitor and record monthly and annual production.

Permit Conditions 2.11 – 2.12

These permit conditions incorporate sulfur content specifications for fuels in accordance with IDAPA 58.01.01.725.

MRRR include the following (Permit Condition 2.12):

- Record sulfur content of each fuel oil shipment as-received.

Permit Condition 2.13

This permit condition incorporates federally applicable requirements (NSPS and NESHAP) by reference in accordance with IDAPA 58.01.01.107.

Permit Condition 2.14

This permit condition specifies the DEQ address for submittal of reports, certifications, notifications, etc.

Permit Condition 3.1

This permit condition incorporates emission standards for the generator engines from NSPS Subpart IIII. Refer to the NSPS Applicability (40 CFR 60) section for additional information.

The short-term pollutant emission rate estimates (for criteria, HAP, and TAP pollutants) corresponding to these limits were the basis for preconstruction modeling compliance demonstrations (NAAQS and TAP) involving short-term and annual averaging periods. Refer to the Emission Inventories and Ambient Air Quality Impact Analyses sections for additional information.

Continued compliance with NSPS Subpart IIII standards (Permit Conditions 3.1 – 3.9) for benzene, 1,3-butadiene, fluorene, formaldehyde, naphthalene, phenanthrene, and POM emissions is required in accordance with IDAPA 58.01.01.210.21 to ensure TAP exemption applicability under IDAPA 58.01.01.210.20. Refer to the Emission Inventories section for additional discussion.

Permit Condition 3.2

This permit condition incorporates compliance requirements for the generator engines from NSPS Subpart IIII. Refer to the NSPS Applicability (40 CFR 60) section for additional information.

Permit Condition 3.3

This permit condition incorporates operating and maintenance requirements for the generator engines from NSPS Subpart IIII. Refer to the NSPS Applicability (40 CFR 60) section for additional information.

Permit Condition 3.4

This permit condition incorporates monitoring requirements for the generator engines from NSPS Subpart IIII. Refer to the NSPS Applicability (40 CFR 60) section for additional information.

Permit Condition 3.5

This permit condition incorporates fuel requirements for the generator engines from NSPS Subpart IIII. Refer to the NSPS Applicability (40 CFR 60) section for additional information.

The short-term and annual SO_2 emission rate estimates associated with the sulfur content limit were also used as the basis for preconstruction modeling compliance demonstrations (NAAQS) involving short-term and annual averaging periods.

Initial Permit Condition 3.6

This permit condition incorporates testing requirements for the generator engines from NSPS Subpart IIII. Refer to the NSPS Applicability (40 CFR 60) section for additional information.

Initial Permit Condition 3.7 – 3.8

These permit conditions establish a compliance option for portable or transportable engines subject to regulation as nonroad engines (i.e., in lieu of regulation under NSPS Subpart IIII).

MRRR include the following (Permit Condition 3.8):

- Identify nonroad engines, record nonroad engine locations and time at each location to verify nonroad engine regulatory applicability.

Permit Condition 3.9

This permit condition incorporates NSPS general provisions in accordance with 40 CFR 60, Subpart A, as required by Subpart IIII.

Permit Conditions 4.1 – 4.3

These permit conditions incorporate general compliance provisions as follows:

- Requirement to comply with permit terms and conditions pursuant to Idaho Code §39-101.
- Requirement to maintain and operate all treatment and control facilities at the facility in accordance with IDAPA 58.01.01.211.
- Requirement that no permit condition is intended to relieve or exempt the permittee from compliance with applicable state and federal requirements, in accordance with IDAPA 58.01.01.212.01.

Permit Condition 4.4

The inspection and entry general provision requires that the permittee allow DEQ inspection and entry pursuant to Idaho Code §39-108.

Permit Conditions 4.5 – 4.6

These permit conditions establish construction and operation general provisions as follows:

- The permit expires if construction of the proposed equipment has not begun with two years following permit issuance, or if construction has been suspended for a year, in accordance with IDAPA 58.01.01.211.02.
- DEQ shall be notified of the specified dates of construction and operation, in accordance with IDAPA 58.01.01.211.03.

The proposed construction schedule (at the time of permit issuance) has been provided for reference in Appendix A – Dust Control Plan.

Permit Conditions 4.7 – 4.9

The performance testing general provisions require notification of intent to test, testing in accordance with the procedures of IDAPA 58.01.0.157, and reporting of test results in accordance with IDAPA 58.01.01.157.

The permittee is encouraged to submit performance test protocol to DEQ for approval prior to any performance testing.

Permit Condition 4.10

The monitoring and recordkeeping general provision requires that the permittee maintain sufficient records to ensure compliance with permit conditions, in accordance with IDAPA 58.01.01.211.

Permit Condition 4.11

The excess emissions general provision requires compliance with excess emission procedures and requirements in accordance with IDAPA 58.01.01.130-136.

Permit Condition 4.12

The certification general provision requires that a responsible official certify all documents submitted to DEQ, in accordance with IDAPA 58.01.01.123.

Permit Condition 4.13

The false statement provision requires that no person make false statements, representations, or certifications, in accordance with IDAPA 58.01.01.125.

Permit Condition 4.14

The tampering provision requires that no person render inaccurate any required monitoring device or method, in accordance with IDAPA 58.01.01.126.

Permit Condition 4.15

The transferability provision specifies that this permit to construct is transferable, in accordance with the procedures of IDAPA 58.01.01.209.06.

Permit Condition 4.16

The severability provision specifies that permit conditions are severable, in accordance with IDAPA 58.01.01.211.

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c. During this time, there was a request for a public comment period on DEQ's proposed action. Refer to the Application Chronology section for public comment opportunity dates.

Public Comment Period

A public comment period was provided in accordance with IDAPA 58.01.01.209.01.c. During this time, a comment was submitted in support of the project and DEQ's proposed action. Refer to the Application Chronology section for public comment period dates, and to Appendix E – Public Comments for a copy of the comments received.

Appendix A – Dust Control Plan

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Dust Control Plan

This Dust Control Plan identifies the fugitive dust sources at the Lane Creek site and describes all of the dust control measures to be implemented before, during, and after any dust generating activity for the duration of the project.

Dust Control Plan
Section 1 – General Information – Page 1

1-A Project Name and Location

Project Name: Lanes Creek Mine

Project Address: 20 miles Northeast of Soda Springs

Physical Address: 3010 Conda Road

City/State/Zip: Soda Springs, Idaho 83276 County: Caribou

Section(s): 4 & 9 Township: 7 S Range: 44 E

Section(s): 32 Township 6 S Range: 44 E

Expected Construction Start Date: 2013 End Date: 2019

1-B Contacts

Names, addresses, and phone numbers of persons and operators responsible for the implementation of the Dust Control Plan and responsible for the dust generating operation.

Mine Manager: Erika Stoner, Mine Manager

Address: P.O. Box 758 / 3010 Conda Road

City / State / Zip: Soda Springs, Idaho 83276

Phone: (208) 574-2080 Fax: N/A

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Section 1 – General Information – Page 2

Project Name: Lanes Creek Mine

1-C Contractors

Provide the names, addresses, and phone numbers of the contractors involved in dust generating activities or performing dust control as part of this project.

1. Kiewit Mining Group, 3826 Blackfoot River Road, Soda Springs, ID 83276
   (208) 547-1097

1-D The following will have the primary responsibility for implementing this Dust Control Plan?

Primary Project Contact: Erika Stoner
Title: Mine Manager
Company Name: Agrium Conda Phosphate Operations (CPO)
Address: P.O. Box 758 / 3010 Conda Road
City / State / Zip: Soda Springs, Idaho 83276
On-Site Phone: (208) 574-2080 Fax: N/A
Mobile Phone: N/A Pager: N/A

1-E Provide a brief description of the project's operations.

Agrium is proposing to construct and operate an open-pit phosphate mine on the northeastern ridge of Rasmussen Ridge in Caribou County, Idaho. During mine development, the LCM will expand the existing open pit, the existing south overburden stockpile storage area will be expanded and an area for a separate overburden storage area to the north will be established. Additionally, storm water and sediment control structures, a facilities area, an ore stockpile area, a growth media storage area, and access and haul roads within the lease will be constructed to support mining operations. There will be a total of 129.7 acres of new surface disturbance and 36 acres of existing disturbance.

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Dust Control Plan
Section 2 – Plot Plan – Page 1

Project Name: Lanes Creek Mine

2-A Plot Plan

A plot plan or facility layout map identifies the location of the project. Refer to Figure 1-1 for a facility layout map. Attached maps may include tract maps, site maps, and topographic maps. Use the checklist below to make sure all areas have been identified on the facility layout map.

Identify the relative locations of actual and potential sources of fugitive dust emissions.

- ☒ Bulk material handling and storage areas.
- ☒ Paved and unpaved access roads, haul roads, traffic areas, and equipment storage yards.
- ☒ Drilling and Blasting operations
- ☐ Exit points where carryout and trackout onto paved public roads may occur.
- ☒ Water supply locations if water application will be used for controlling visible dust emissions.
- ☒ Freeways, roads, or traffic areas that may be affected by the dust generating activities.

Water for dust suppressant will come from a water well located at the Rasmussen Valley Mine

2-B Facility Map

☒ Figure 1 provides a facility layout map.

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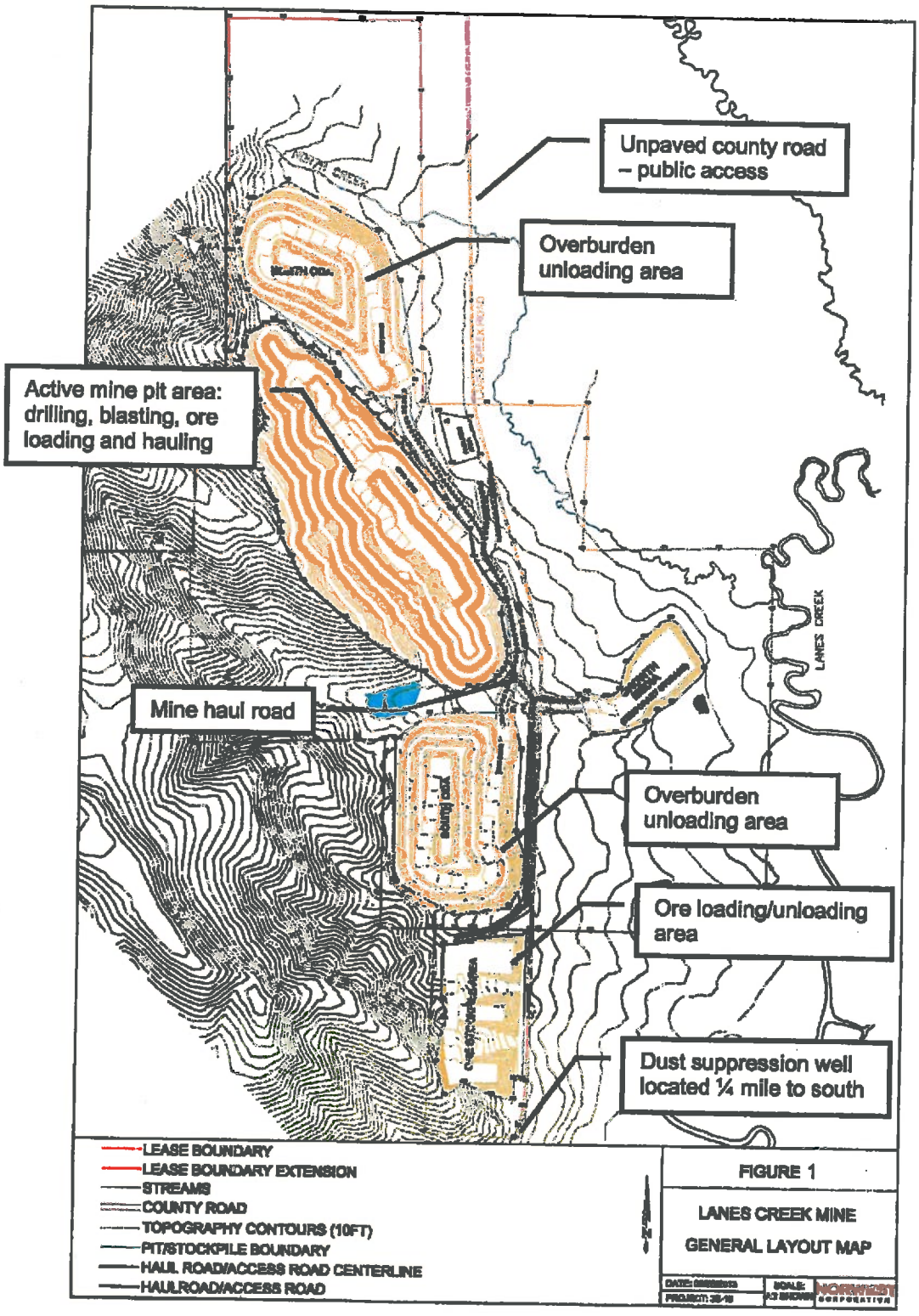
Figure 1-1

Lanes Creek Mine Out



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Dust Control Plan
Section 3 – Fugitive Dust Sources – Page 1

Project Name: Lanes Creek Mine

3-A Disturbed Surface Area

Report the total area of land surface to be disturbed, the daily throughput volume of earthmoving in cubic yards, and the total area in acres of the entire project site.

Total area of existing surface disturbances:	36	Acres
Total area of new surface to be disturbed:	129.7	Acres
Total throughput volume of earthmoving:	13.1 million	Cubic Yards
Total area of entire project site:	352	Acres

3-B Dust Generating Activity Dates

The expected start and completion dates of dust generating activities and soil disturbance activities to be performed on site.

Expected start date: 2013 **Completion Date:** 2019

Phase Project Start – A: 2013 (Mining) Completion – A: 2017

Phase Project Start – B: 2017 (Reclamation) Completion – B: 2019

3-C Other Locations

Other locations included with this plan that are involved with this project. An example may include listing any site where materials will be imported from or exported to.

☐ No other locations are included with this project. (Skip to 3-D)

Location 1: Lanes Creek Haul Road

☐ No Dust Control Plan Required ☒ Included with this plan ☐ Included with another plan

Location 2: Wooley Valley Tipple

☒ No Dust Control Plan Required ☐ Included with this plan ☐ Included with another plan

Location 3: _____

☐ No Dust Control Plan Required ☐ Included with this plan ☐ Included with another plan

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Section 3 – Fugitive Dust Sources – Page 2

Project Name: Lanes Creek Mine

3-D Sources of Fugitive Dust

Procedures to limit visible dust emissions from activities that cause fugitive dust emissions.
Check at least one box under each category.

Pre-Activity.

- ☒ The site will be pre-watered and work will be phased to reduce the amount of disturbed surface area at any one time (Refer to Section 4-A).

Active Operations.

- ☒ Water will be applied to dry areas during leveling, grading, trenching, drilling, and earthmoving activities (Refer to Section 4-A).
- ☒ Dust suppressants may be applied to the disturbed surface areas (Refer to Sections 4-A or 4-B, and 4-C).

Inactive Operations, including after work hours, weekends, and holidays.

- ☒ Water or dust suppressants will be applied on disturbed surface areas to form a visible crust, and vehicle access will be restricted to maintain the visible crust. (Refer to Section 4-A or 4-B, and 4-C)

Temporary stabilization of areas that remains unused for seven or more days.

- ☒ Vehicular access will be restricted and water or dust suppressants will be applied and maintained at all un-vegetated areas (Refer to Section 4-A or 4-B, and 4-C).
- ☒ Vegetation will be established on all previously disturbed growth media areas (Refer to Section 4-C).
- ☐ Gravel will be applied and maintained at all previously disturbed areas (Refer to Section 4-C).
- ☐ Previously disturbed areas will be stabilized by vegetation, compaction … (Refer to Section 4-C).

Unpaved Access and Haul Roads, Traffic and Equipment Storage Areas.

- ☒ Apply water or dust suppressants to unpaved haul and access roads (Complete Section 4-A or 4-B)
- ☒ Post speed limit signs of not more than 15 miles per hour at each entrance, and again every 1000 feet. (Refer to Section 4-C)
- ☒ Water or dust suppressants will be applied to vehicle traffic and equipment storage areas (Refer to Section 4-A or 4-B).

Wind Events.

- ☒ Water application equipment will apply water to control fugitive dust during wind events, unless unsafe to do so. Activities that disturb the soil will cease whenever visible dust emissions cannot be effectively controlled.

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Section 3 – Fugitive Dust Sources – Page 3

3-E Bulk Materials

Handling of Bulk Materials.

- ☐ Water or dust suppressants will be applied when handling bulk materials.
- ☐ Wind barriers with less than 50 percent porosity will be installed and maintained, and water or dust suppressants will be applied.

Storage of Bulk Materials.

- ☒ Water, or dust suppressants, or re-seeding of stockpiles will be applied.
- ☐ Wind barriers with less than 50 percent porosity will be installed and maintained around the storage piles, and water or dust suppressants will be applied.

On-Site Transporting of Bulk Materials.

- ☒ Vehicle speed will be limited on the work site to 15 mph.
- ☒ All haul trucks will be loaded such that the freeboard is not less than six inches when transported across any paved public access road.

Off-Site Transporting of Bulk Materials.

- ☐ The following practices will be performed: (Refer to Section 5-B)

3-F Comments

Agrium shall conduct monthly facility-wide inspections of potential sources of fugitive dust emissions, during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive dust emissions are effective.

Agrium shall maintain records of all fugitive dust complaints received for a minimum period of two years. Agrium shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date that each complaint was received and a description of the complaint, Agrium's assessment of the validity of the complaint, any corrective action taken, and the date the corrective was taken. A record of fugitive dust complaints shall be maintained by the mine project manager.

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Dust Control Plan
Section 4 – Dust Control Methods – Page 1

Project Name: Lanes Creek Mine

4-A Water Application

Water application will be used for limiting visible dust emissions and stabilizing surface areas. Check and answer everything that applies to this project.

Water Application Equipment:

☐ Sprinklers: Describe the activities that will utilize sprinklers:

Minimum treated area: _____ ☐ Square Feet ☐ Acres

Maximum treated area: _____ ☐ Square Feet ☐ Acres

Minimum water flow rate: _____ Gallons/minute Duration: _____

☒ Water Truck, ☐ Water Trailer, ☐ Water Wagon, ☐ Other: _____

Describe the activities that will utilize this equipment:

Haul roads, ore, overburden, and growth media stockpiles, and facilities area.

Number of application equipment available: 1 Water Truck

Application equipment capacity: 500 gallons

Application frequency: Up to 4 Times Per Day

Hours of operation: 12 to 20 hours/day

Water Supply:

☐ Storage tanks

☒ Wells Agrium South Rasmussen Valley Site – 1 Off-Site Water Well

☐ Canal, River, Pond, Lake, etc. Describe: _____

Approval granted by the owner or public agency to use their water source for this project.

Owner or Agency: Agrium CPO

Contact: Erika Stoner (Mine Manager) Phone No.: (208) 574-2080

☐ Other: _____

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Section 4 – Dust Control Methods – Page 2

Project Name: Lanes Creek Mine

4-B Dust Suppressant Products

Complete this section if a dust suppressant product will be used. These materials include, but are not limited to: hygroscopic suppressants (road salts), adhesives, petroleum emulsions, polymer emulsions, and bituminous materials (road oils).

☒ **Not Applicable.** At this time only water application will be utilized to control fugitive emissions. If magnesium chloride is utilized, Agrium will provide MSDS, environmental approvals, and manufacturer's usage instructions. Skip to 4-C.

Application Area: _____

Product Name: _____

Contractor's Name: _____ Phone No: _____

Application Rate: _____ Gallons of undiluted material per ☐ mile or ☐ acre treated.

Application Frequency: _____ Applications per ☐ week, ☐ month, ☐ year

Application Equipment: _____

Number of Application Equipment Available: _____

Application Equipment Capacity: _____

Attach each of the following information that fully describes this product. Use the checklist below to make sure all information is submitted with this plan.

- ☐ Product Specifications (MSDS, Product Safety Data Sheet, etc.)
- ☐ Manufacturer's Usage Instructions (method, frequency, and intensity of application)
- ☐ Environmental Impacts and approvals or certifications related to the appropriate and safe use for ground application.

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Section 4 – Dust Control Methods – Page 3

Project Name: Lanes Creek Mine

4-C Other Dust Control Methods

Check below the other types of dust control methods that will be employed at the site.

☒ Physical barriers for restricting unauthorized vehicle access:
☒ Fences ☒ Gates ☒ Signs ☐ Berms ☐ Concrete Barriers
☐ Other: _____

☐ Wind barriers Describe: _____

☒ Posted speed limit signs
☒ Posted at 15 miles per hour, ☐ Posted at _____ miles per hour (less than 15 MPH)

☒ Re-establish vegetation for temporarily stabilizing previously disturbed surfaces.
Explain: Growth media stockpiles and roadside berms will be vegetated

☒ Apply and maintain gravel:
☒ On haul roads ☒ On access roads ☒ At equipment storage yards
☒ At vehicle traffic areas ☐ For temporarily stabilizing previously disturbed areas.
Explain: Facilities area and on-site access and haul roads will be constructed using a gravel base

☐ Apply pavement:
Explain: _____

☐ Other: _____

4-D Contingencies

Contingencies to be implemented if application equipment becomes inoperable, more equipment is needed to effectively control fugitive dust emissions during active and inactive periods, accessibility limitations occur at the water sources, or staff is not available to operate the application equipment. Describe the contingencies that will be in place and when they will be implemented. Provide any additional information below.

In the event that the water truck becomes inoperable, the water truck will either be repaired or another measure of controlling fugitive dust would be utilized as expeditiously as practicable. Mine personnel will be responsible for assisting the mine manager in controlling fugitive dust emissions. Applicable mine personnel will have access to either an electronic or paper copy of the dust control plan.

4-E Record keeping

Records and any other supporting documents for demonstrating compliance must be maintained, but only for those days when a control measure is implemented. IDEQ has developed record keeping forms that may be used for complying with this requirement. Check below:

☒ Records will be maintained using documents and forms developed by IDEQ.
Fugitive Dust Control Method Log, Weather Log, Self Inspection Checklist

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Example - Self-Inspection Checklist: Fugitive Dust Control Method Log

Date	Time	Control Method	Comments
5-09-14	7 AM	Water Truck	All haul roads on facility grounds
5-09-14	7 AM	Water Truck	Entrance of facility/North stock pile area only
5-09-14	7 AM	Water Truck	All haul roads on facility grounds
5-09-14	7 AM	See weather log	All haul roads on facility grounds
5-09-14	7 AM	See weather log	All haul roads on facility grounds

Example - Self-Inspection Checklist: Weather Log

Date	Temperature	Wind Speed/Direction	Amt. of Rainfall	Comments
10-10-14	55 F (high)	5 mph	0.10 inch	Wet, cloudy, cold
10-11-14	50 F (high)	8 mph	0.0 inch	Wet, cloudy, cold
10-12-14	56 F (high)	8 mph	0.05 inch	Wet, cloudy, cold
10-16-14	52 F (high)	7 mph	0.0 inch	Wet, cloudy, cold

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Dust Control Plan
Section 6 – Certification

Project Name: Lanes Creek Mine

6-A Certification

The responsible official, principle operator, or the individual implementing must certify the plan.

I certify that all information contained herein and information submitted in the attachments to these documents are true and correct to the best of my knowledge.

Erika Stoner Print Name	Mine Manager Title
 Signature	 Date

(208) 574-2080 Phone Number	N/A Fax Number	N/A Cell Number

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Self-Inspection Checklist: Fugitive Dust Control Method Log

Fugitive Dust Source: **Haul Roads**

Date	Time	Control Method	Comments

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Self-Inspection Checklist: Fugitive Dust Control Method Log

Fugitive Dust Source: <u>Ore Stockpile</u>

Date	Time	Control Method	Comments

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Self-Inspection Checklist: Fugitive Dust Control Method Log

Fugitive Dust Source: North & South Overburden Stockpiles

Date	Time	Control Method	Comments

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Self-Inspection Checklist: Fugitive Dust Control Method Log

Fugitive Dust Source: <u>Drilling</u>

Date	Time	Control Method	Comments

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Self-Inspection Checklist: Fugitive Dust Control Method Log

Fugitive Dust Source: <u>Facilities Area</u>

Date	Time	Control Method	Comments

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Self-Inspection Checklist: Weather Log

Date	Temperature	Wind Speed / Direction	Amt. of Rainfall	Comments

Appendix B – Proposed Construction Schedule

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Lanes Creek Mine Anticipated Construction Schedule

- **Fall 2013**
    - Implement preliminary water management plan
    - Topsoil strip, and road construction as needed to access GM stockpile
    - GM strip of "new" pond locations (1A and 1B), GM strip of access roads as needed and (potentially) facilities area
    - Construct 2 ponds to replace existing pond 1: Pond 1A east of Lanes Creek Road, Pond 1B near existing pit
    - Reconfigure/decommission temp channels for stormwater management
    - Stabilize site for Winter 2013/2014
- **Spring 2014 (June/July)**
    - Topsoil strip for Phase 1 mine pit footprint and all stockpile areas (N and S ODA), ore stockpile
    - Strip/construct haul roads and access roads, facilities area if not completed in 2013
    - Establish stockpile footprints and access/haul roads
    - North ODA low-permeability base construction
    - Additional water management feature construction (culverts, ditches, ponds)
    - Build out facilities area (generator, AST, temp structures)
- **Late Summer/Fall (and into winter of) 2014**
    - 1st phase of mining, to continue as needed to meet first year volume requirement
    - 1st ore haul in December 2014 to March 2015.

Appendix C – Emission Inventories

Lanes Creek Mine Emissions Summary

	PM_{10}		$PM_{2.5}$		SO_2		NOx		CO		VOC		CO_2e	
Source	lb/hr	T/Yr	lb/hr	T/Yr	lb/hr	T/Yr	lb/hr	T/Yr	lb/hr	T/Yr	lb/hr	T/Yr	lb/hr	T/Yr
198 HP Diesel Generator	0.10	0.23	0.10	0.23	0.41	1.78	1.22	5.35	0.31	1.34	1.22	5.35	227.70	997.33
198 HP Diesel Generator	0.10	0.23	0.10	0.23	0.41	1.78	1.22	5.35	0.31	1.34	1.22	5.35	227.70	997.33
1 Diesel Light Plant (Ore Stockpile)	0.02	0.04	0.02	0.04	0.03	0.13	0.17	0.76	0.15	0.66	0.17	0.76	16.10	70.52
1 Diesel Light Plant (Facilities Area)	0.02	0.04	0.02	0.04	0.03	0.13	0.17	0.76	0.15	0.66	0.17	0.76	16.10	70.52
1 Diesel Light Plant (North ODA)	0.02	0.04	0.02	0.04	0.03	0.13	0.17	0.76	0.15	0.66	0.17	0.76	16.10	70.52
1 Diesel Light Plant (South ODA)	0.02	0.04	0.02	0.04	0.03	0.13	0.17	0.76	0.15	0.66	0.17	0.76	16.10	70.52
1 Diesel Light Plant (Pit)	0.02	0.04	0.02	0.04	0.03	0.13	0.17	0.76	0.15	0.66	0.17	0.76	16.10	70.52
1 Diesel Light Plant (Pit)	0.02	0.04	0.02	0.04	0.03	0.13	0.17	0.76	0.15	0.66	0.17	0.76	16.10	70.52
1 Diesel Light Plant Pit)	0.02	0.04	0.02	0.04	0.03	0.13	0.17	0.76	0.15	0.66	0.17	0.76	16.10	70.52
1 Diesel Light Plant (Pit)	0.02	0.04	0.02	0.04	0.03	0.13	0.17	0.76	0.15	0.66	0.17	0.76	16.10	70.52
1 Diesel Light Plant (Pit)	0.02	0.04	0.02	0.04	0.03	0.13	0.17	0.76	0.15	0.66	0.17	0.76	16.10	70.52
Diesel Tank	—	—	—	—	—	—	—	—	—	—	0.002	0.01		
Blasting	6.3	1.9	0.36	0.11	0.41	1.80	3.49	15.30	13.77	60.30	—	—	—	—
Drilling	0.8	1.61	0.43	0.90	—	—	—	—	—	—	—	—	—	—
Haul Roads	6.56	14.37	0.66	1.44	—	—	—	—	—	—	—	—	—	—
North OSA Pile	0.77	1.69	0.12	0.25	—	—	—	—	—	—	—	—	—	—
South OSA Pile	0.77	1.69	0.12	0.25	—	—	—	—	—	—	—	—	—	—
Ore Stock Pile	1.51	3.31	0.23	0.50	—	—	—	—	—	—	—	—	—	—
Growth Media Pile	0.28	0.62	0.04	0.09	—	—	—	—	—	—	—	—	—	—
North OSA Truck Load/Unload	0.19	0.42	0.03	0.06	—	—	—	—	—	—	—	—	—	—
South OSA Truck Load/Unload	0.21	0.46	0.03	0.07		—	—	—	—	—	—	—	—	—
Ore Stock Pile Truck Load/Unload	0.05	0.23	0.01	0.03										
Growth Media Truck Load/Unload	0.06	0.13	0.01	0.02										
Pit Truck Loading	0.06	0.13	0.01	0.02										
Post Project Totals	**17.92**	**27.35**	**2.42**	**4.57**	**1.48**	**6.49**	**7.49**	**32.82**	**15.74**	**68.94**	**4.00**	**17.53**	**600.30**	**2629.31**

(1) Total media growth represents the loading and unloading of media growth from the pit to the stockpile, the stockpile and from stockpile to reclamation.

(2) Total waste rock represents north and south stockpiles, loading/unloading from the pit to the stockpiles and stockpiles back to pit/reclamation

(3) Total disturbed acreage includes mine pit, north and south ODA, sediment control, facilities area, ore stockpile, growth media, and access and haul roads

(3) Total disturbed acreage in considered a short-term, one time event, therefore emssions were not included in modeling

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Potential TAP Emissions and DEQ Modeling Thresholds

Pollutant	Level I Threshold (lb/hr)	Agrium Total Facility Emissions (lb/hr)	Modeling Required?
Aluminum	1.33E-01	8.51E-02	No
Antimony	3.30E-02	1.90E-05	No
Arsenic	1.50E-06	8.30E-05	Yes
Beryllium	2.80E-05	8.46E-06	No
Cadmium	3.70E-06	3.11E-04	Yes
Chromium	3.30E-02	2.72E-03	No
Cobalt	3.30E-03	2.10E-04	No
Copper	6.70E-02	3.65E-04	No
Iron	6.70E-02	9.63E-02	Yes
Manganese	3.33E-01	2.10E-03	No
Mercury	2.50E+01	1.26E-08	No
Molybdenum	3.30E-01	8.48E-05	No
Nickel	2.70E-05	8.28E-04	Yes
Selenium	1.30E-02	2.23E-04	No
Silver	7.00E-03	2.43E-05	No
Tungsten	7.00E-03	1.05E-05	No
Uranium	1.30E-02	2.89E-04	No
Zirconium	3.33E-01	1.76E-03	No
Zinc	6.67E-01	5.57E-03	No

Please note that the TAPs emitted from the diesel engines that power the emergency generators and light towers are exempt from modeling review pursuant to Section 210.20 because they are subject to either NSPS or MACT standard. Therefore only TAP emissions from the mining operation were considered.

For modeled TAP including arsenic, cadmium, iron, and nickel, refined emission estimates used in modeling demonstrations are provided in Table 10 of Appendix D.

Lanes Creek Mine Facility Wide HAPs

HAP	Lb/hr	TPY
Benzene	2.68E-03	1.17E-02
Toluene	1.17E-03	5.14E-03
Xylene	8.18E-04	3.58E-03
1,3 Butadiene	1.12E-04	4.92E-04
Formaldehyde	3.39E-03	1.48E-02
Acrolein	2.65E-04	1.16E-03
Acetaldehyde	2.20E-03	9.64E-03
Naphthalene	2.43E-04	1.07E-03
Total HAP	**1.09E-02**	**4.76E-02**

Appendix D – Ambient Air Quality Impact Analyses

MEMORANDUM

DATE: May 2, 2014

TO: Morrie Lewis, Permit Writer, Air Quality Division

FROM: Cheryl Robinson, P.E., Air Quality Engineer/Modeling Analyst, Air Quality Division

PROJECT NUMBER: P-2013.0046 PROJ 61244

SUBJECT: Modeling Review for Nu-West (Agrium), Lanes Creek Mine
Initial PTC for Open Pit Phosphate Ore Mine
Facility ID 029-00041

1.0 Summary

On July 25, 2013, DEQ received an application from Nu-West Industries, Inc., dba Agrium Conda Phosphate Operations (Agrium) for a new open pit phosphate ore mine—Lanes Creek Mine—proposed to be located along the southeast side of the south toe of Rasmussen Ridge. The initial application and modeling analyses were prepared by Hildebrand & Associates, LLC (Hildebrand).

The application was determined to be incomplete on August 23, 2013. Hildebrand was replaced by RTP Environmental in October 2013. On October 30, 2013, RTP proposed the following changes to the modeling analyses:

1. A new receptor grid was developed with the following spacing:
   - 25m along fence and Lanes Creek Road
   - 25m from fence to 150m
   - 100m from 150m to 2500m
   - 250m from 2500m to 5000m
2. The roads and all volume source locations were redigitized based upon the facility CAD drawing.
3. The volume source characteristics for the storage piles were recalculated based upon pile heights provided by Haley Aldrich (the vertical and lateral dimensions of each pile were also recalculated based upon the footprints from the CAD).
4. AERMAP was re-run to recalculate receptor and source elevations.
5. The "open pit" source will not be included in the model because emissions from the sources in the pit will be modeled individually (i.e., the roads, truck loading, drilling, and blasting all occur within the pit. Each of these sources will be modeled as an individual volume or area source. We believe any wind disturbance emissions are accounted for in the emission estimates for each individual source).
6. The maximum ore loaded was reduced from 3 million tons per year to 1.25 million tons per year.
7. Dust control effectiveness on the haul roads was increased from 70 to 90 percent based on EPA guidance.

RTP also provided base maps, the model setup (as an Oris Solutions' BEEST file), and a spreadsheet documenting the development of the volume source parameters. Final modeling files and modeling report for criteria pollutants and toxic air pollutants (TAPs) were received by DEQ on January 3, 2014.

The facility is not a *designated facility*, as defined in IDAPA 58.01.01.006, Rules for the Control of Air Pollution in Idaho (Idaho Air Rules). The facility's potential to emit (PTE) of particulate matter with an

aerodynamic diameter of ten microns or less (PM_{10}), particulate matter with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$), sulfur dioxide (SO_2), carbon monoxide (CO), and nitrogen oxides (NO_x) each is less than 100 tons per year (T/yr). The facility is not a major facility under the New Source Review (NSR) PSD program.

Air quality analyses involving atmospheric dispersion modeling of emissions associated with the facility were performed to demonstrate the facility would not cause or significantly contribute to a violation of any ambient air quality standard (IDAPA 58.01.01.203.02 [Idaho Air Rules Section 203.02]) or Toxic Air Pollutant (TAP) increment (Idaho Air Rules Section 203.03).

Air impact analyses are required by Idaho Air Rules to be conducted according to methods outlined in 40 CFR 51, Appendix W (Guideline on Air Quality Models). Appendix W requires that facilities be modeled using emissions and operations representative of design capacity or as limited by a federally enforceable permit condition. The submitted information, demonstrated to the satisfaction of the Department that operation of the proposed facility or modification will not cause or significantly contribute to a violation of any ambient air quality standard, provided the key conditions in Table 1 are representative of facility design capacity or operations as limited by a federally enforceable permit condition.

Table 1. KEY ASSUMPTIONS USED IN MODELING ANALYSES

Criteria/Assumption/Result	Explanation/Consideration
Approximately 1.25 million tons of ore per year are mined.	Modeled ambient impacts based on these assumptions were 82% of the 24-hr PM_{10} NAAQS, 69% of the24-hr $PM_{2.5}$ NAAQS, and 77% of the annual $PM_{2.5}$ NAAQS.
Modeling analyses easily demonstrated compliance with all applicable ambient air quality standards.	No special operational provisions or restrictions, beyond those described in the application, are needed in the permit to assure compliance with standards. This assumes all sources were accurately accounted for and modeled in the submitted application.

1.1.1 Project Scope

The scope of this project for the Lanes Creek Mine is to construct and operate an open-pit phosphate ore mine extracting 0.75 million tons of phosphate ore per year, on average, with a total of 3 million tons of recoverable ore mined over approximately four years of active mining. An additional year of operations is planned for site reclamation.

. The air quality permit analysis was based on the following assumptions:

- Construction of a facilities area and on-lease mine haul roads and access roads on the approximately 350-acre site.
- Combustion units include portable light towers and emergency generators.
- A maximum of 1.25 million tons of phosphate ore mined per year.
- No ore crushing or smelting at the mine site.
- Removal of growth media from the proposed areas of disturbance and temporarily placing in an existing growth media storage area.
- Expansion of the existing south overburden storage area (south OSA),
- Establish a separate overburden stockpile to the north (north OSA),
- Mining activities may occur at any time during the year.
- Ore removed during mining will be temporarily stored south of the pit in the ore stockpile area.
- Overburden material removed during mining will be temporarily stored north and south of the pit in the overburden stockpile areas.
- As soon as practicable, overburden material will be selectively backfilled into previous mining excavations.
- Ore will be loaded into tractor-trailer highway trucks which will transport the ore approximately 30 miles round-trip via existing county (Lanes Creek Road) and private haul roads to Agrium's existing Wooley Valley Tipple site for transportation to Agrium's Conda Phosphate Operations processing plant.
- Seasonal ore haulage to the Wooley Valley Tipple will occur during the winter months (December through March) when the county road is closed to the public and/or as agreed to with Caribou County.
- Site reclamation plan includes returning all currently exposed selenium-containing materials (seleniferous materials) into the mine pit, returning the site to its original topography and restoring original drainage patterns.

1.1.2 Project Timeline

The project timeline and associated submissions are listed below:

• (unknown)	Pre-application meeting.
• March 13, 2013	Hildebrand submitted a modeling protocol. During this period, DEQ conducted a detailed review of 40 CFR 60, Subpart IIII (NSPS) and 40 CFR 63, Subpart ZZZZ (NESHAP) to determine which state-regulated TAPs were regulated under these federal rules.
• May 31, 2013	DEQ issued modeling protocol approval to Hildebrand.
• July25, 2013	Application received.
• August 21, 2013	After a very cursory review of the modeling analyses due to workload and time constraints, the permit writer was told that the modeling appeared to be complete.

- August 23, 2013 — Application determined to be incomplete due to missing information about emissions of federal hazardous air pollutants (HAPs)/state-only toxic air pollutants (TAPs).
- September 13, 2013 — Agrium requested additional time to respond to the incompleteness.
- Late October, 2013 — DEQ modeling staff was contacted by Dave Keen of RTP Environmental, who had replaced Hildebrand on this project. DEQ recommended that the modeling be set up from scratch rather than attempting to modify Hildebrand's files.
- October 30, 2013 — DEQ received draft model setup files and calculations supporting volume source dimensions from RTP.
- November 4, 2013 — DEQ issued an addendum to the modeling protocol approval clarifying that road fugitives must be included.
- Nov – Dec 2013 — Agrium was better characterizing the potential HAPs emissions.
- December 31, 2013 — DEQ received revised modeling and modeling report.
- January 30, 2014 — Application was determined to be complete.

2.0 Background Information

2.1 Applicable Air Quality Impact Limits and Modeling Requirements

This section identifies applicable ambient air quality limits and analyses used to demonstrate compliance for this facility located about 25 km (15.5 miles) northeast of Soda Springs. Approximate UTM coordinates for the facility are 474.216 km Easting and 4743.478 km Northing, in UTM Zone 12 (Datum WGS84). The approximate base elevation at the facility is 2100 meters.

2.1.1 Area Classification

The proposed facility is located within Caribou County which is designated as an attainment or unclassifiable area for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone, particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers ($PM_{2.5}$), and sulfur oxides (SO_x). There are no Class I areas within 10 kilometers of this location.

2.1.2 DEQ Modeling Thresholds

Modeling is typically not required if the changes in estimated criteria pollutant emission rates for a proposed project are below DEQ's modeling thresholds, shown in Table 2. "Case-by-case" thresholds may be used only with prior DEQ approval. "Threshold II" values were approved for this project.

Table 2. DEQ CRITERIA POLLUTANT MODELING THRESHOLDS

Criteria Air Pollutants	Averaging Period	DEQ Modeling Thresholds			
		Threshold I		Threshold II (Case-by-Case)	
PM_{10}	24-hr	0.22	lb/hr	2.6	lb/hr
$PM_{2.5}$	24-hr	0.054	lb/hr	0.63	lb/hr
	Annual	0.35	T/yr	4.1	T/yr
CO	1-hr, 8-hr	15	lb/hr	175	lb/hr
NO_2	1-hour	0.20	lb/hr	2.4	lb/hr
	Annual	1.2	T/yr	14	T/yr
SO_2	1-hr	0.21	lb/hr	2.5	lb/hr
	Annual	1.2	T/yr	14	T/yr
Lead	3-month rolling avg	14	lb/mo		

2.1.3 Significant and Cumulative NAAQS Impact Analyses

If estimated maximum pollutant impacts to ambient air from the emissions sources associated with the existing unpermitted facility exceed the significant contribution levels (SCLs) of Section 006 of IDAPA 58.01.01, Rules for the Control of Air Pollution in Idaho (Idaho Air Rules), then a cumulative impact analysis is necessary to demonstrate compliance with National Ambient Air Quality Standards (NAAQS) and Idaho Air Rules Section 203.02 for Permits to Construct and Section 403.02 for Tier II Operating Permits. A cumulative NAAQS impact analysis for attainment area pollutants involves adding ambient impacts from facility-wide emissions, and emissions from any nearby co-contributing sources, to DEQ-approved background concentration values that are appropriate for the criteria pollutant/averaging-time at the facility location and the area of significant impact. The resulting maximum pollutant concentrations in ambient air are then compared to the NAAQS listed in Table 3. The SCLs and the modeled value that must be used for comparison to the NAAQS are also listed in Table 3.

Table 3. APPLICABLE REGULATORY LIMITS

Pollutant	Averaging Period	Significant Contribution Levels[c] ($\mu g/m^3$)[b]	Regulatory Limit[d] ($\mu g/m^3$)[b]	Modeled Value Used[g, h]
PM_{10}[a]	24-hour	5.0	150[f]	6th high[i]
$PM_{2.5}$[a]	Annual	0.3[b]	12[e]	1st high[j]
	24-hour	1.2[b]	35	8th high[j]
Carbon monoxide (CO)	8-hour	500	10,000[f]	2nd high
	1-hour	2,000	40,000[f]	2nd high
Sulfur Dioxide (SO_2)	Annual	1.0	80[e]	1st high
	1-hour[o]	EPA Interim: 3 ppb[m] (~7.8 $\mu g/m^3$)	0.075 ppm[m,n] (196 $\mu g/m^3$)	4th high[m]
Nitrogen Dioxide (NO_2)	Annual	1.0	100[f]	1st high
	1-hour[m]	EPA Interim: 4 ppb[l] (7.5 $\mu g/m^3$)	0.100 ppm[l, n] (188 $\mu g/m^3$)	8th high[l]
Lead (Pb)	Rolling 3-month average	NA	0.15[f, k]	1st high

[a] Particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) or 2.5 micrometers.

[b] Micrograms per cubic meter.

[c] SCLs are defined in Idaho Air Rules Section 006. $PM_{2.5}$ SCLs (75 FR 64864, October 20, 2010) were adopted as an Idaho temporary rule effective April 26, 2011. The pending rule will become final and effective upon adjournment of the 2012 legislative session if approved by the Idaho Legislature.

[d] Federal NAAQS (see 40 CFR 50) in effect as of July 1 of each year are incorporated by reference during the legislative session the following spring. See Idaho Air Rules Section 107.

[e] Never expected to be exceeded in any calendar year. Changed to 12 $\mu g/m^3$ when the Idaho legislature adjourned *sine die* on March 20, 2014.

[f] Never expected to be exceeded more than once in any calendar year. The 3-hr and 24-hr SO_2 standards were revoked (see 75 FR 35520, June 22, 2010) but will remain in effect until one year after the effective date (~late 2012) of initial area designations for the new 1-hour SO_2 NAAQS (i.e., in effect until ~late 2013).

[g] Concentration at any modeled receptor.

[h] The maximum 1st highest modeled value is always used for significant impact analyses.

[i] PM_{10} concentration at any modeled receptor when using five years of meteorological data. Use the maximum 2nd highest value for analyses with less than five years of meteorological data or one year of site-specific met data.

[j] $PM_{2.5}$ concentration at any modeled receptor when using a single year of site-specific meteorological data or a concatenated file with five years of meteorological data. EPA recommends using the high 8th high 3-year average monitored value for background, and using the highest 24-hr average and highest annual averages across five years of met data for the modeled result (Steven Page memo, Modeling Procedures for Demonstrating Compliance with $PM_{2.5}$ NAAQS, March 23, 2010).

Table 3. APPLICABLE REGULATORY LIMITS				
Pollutant	**Averaging Period**	**Significant Contribution Levels[c] ($\mu g/m^3$)[b]**	**Regulatory Limit[d] ($\mu g/m^3$)[b]**	**Modeled Value Used[g, h]**
[k] Pb: The EPA's October 15, 2008 standard became effective in Idaho's NSR program when it was incorporated by reference into the Idaho Air Rules, i.e., when the Idaho Legislature adjourned *sine die* on March 29, 2010.				
[l] NO_2 concentration at any modeled receptor when using complete year(s) of site-specific met data or five consecutive years of representative meteorological data. Compliance is based on the 3-year average of the 98th percentile of the annual distribution of 1-hour average daily maximum concentrations. EPA Interim SIL, Page memo, dated June 29, 2010.				
[m] SO_2 concentration at any modeled receptor when using complete year of site-specific met data or five consecutive years of representative meteorological data. Compliance is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. EPA Interim SIL, Page memo, dated August 23, 2010.				
[n] EPA's February 10, 2010 1-hour NO_2 standard (75 FR 6474) and June 22, 2010 1-hour SO_2 standard (75 FR 35520) became effective in Idaho on April 7, 2011.				

2.1.4 Toxic Air Pollutant Analyses

Emissions of toxic substances are generally addressed by Idaho Air Rules Section 161:

> *Any contaminant which is by its nature toxic to human or animal life or vegetation shall not be emitted in such quantities or concentrations as to alone, or in combination with other contaminants, injure or unreasonably affect human or animal life or vegetation.*

Permit requirements for toxic air pollutants (TAPs) from new or modified sources are specifically addressed by Idaho Air Rules Section 203.03 and require the applicant to demonstrate to the satisfaction of DEQ the following:

Using the methods provided in Section 210, the emissions of toxic air pollutants from the stationary source or modification would not injure or unreasonably affect human or animal life or vegetation as required by Section 161. Compliance with all applicable toxic air pollutant carcinogenic increments and toxic air pollutant non-carcinogenic increments will also demonstrate preconstruction compliance with Section 161 with regards to the pollutants listed in Sections 585 and 586.

Per Section 210, if the emissions increase associated with a new source or modification exceeds screening emission levels (ELs) of Idaho Air Rules Section 585 or 586, then the ambient impact of the emissions increase must be estimated. If ambient impacts are less than applicable Acceptable Ambient Concentrations (AACs) for non-carcinogens of Idaho Air Rules Section 585 and Acceptable Ambient Concentrations for Carcinogens (AACCs) of Idaho Air Rules Section 586, then compliance with TAP requirements has been demonstrated.

In accordance with Section 210.20 of the Idaho Air Rules, a demonstration of compliance with state-only TAPs standards is not required for any TAP that is regulated at the time of permit issuance under 40 CFR Part 60 (New Source Performance Standards [NSPS]), 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants [NESHAP], or 40 CFR Part 63 (NESHAP for Source Categories / MACT standards).

In a separate action, DEQ reviewed the NSPS (Subpart IIII) and the NESHAP (Subpart ZZZZ) which apply to diesel-fired internal combustion engines such as the ones included in this project. All state-regulated TAPs emitted from these engines are regulated in some way by these federal rules. A demonstration of compliance for state-only TAPs increments was therefore not required for this project.

2.2 Background Concentrations

Background concentrations are used in the cumulative NAAQS impact analyses to account for impacts from sources not explicitly modeled. Background concentrations were revised for all areas of Idaho by

DEQ in March 2003[1] and are currently being updated. Background concentrations in areas where no monitoring data are available were based on monitoring data from areas with similar population density, meteorology, and emissions sources.

DEQ's recommended background levels for this project—which is located in a predominantly rural area with no co-contributing stationary source facilities located nearby—are shown in Table 4.

Table 4. DEQ RECOMMENDED BACKGROUND CONCENTRATIONS (PROTOCOL ADDENDUM 7-18-13)

Pollutant	Averaging Period	Background Concentration (ppb)	Background Concentration ($\mu g/m^3$)	NAAQS	Background Value Reference
PM_{10}	24-hour	---	43	150 $\mu g/m^3$	Idaho DEQ, 2003, Default, Rural remote, non-agricultural
$PM_{2.5}$	24-hour	---	16	35 $\mu g/m^3$	Average of 98th percentile values, 2010-2012, 24-hr block avgs, Campbell County, Wyoming, open pit mining area: WY DEQ monitors near Belle Ayr Ba-4,5n,5s; Btm-36-2 (Black Thunder Mine), and Buckskin Mine North Site.
	Annual	---	5.2	15 $\mu g/m^3$	Average of 98th percentile values, 2010-2012, 24-hr block avgs, Campbell County, Wyoming, open pit mining area: WY DEQ monitors near Belle Ayr Ba-4,5n,5s; Btm-36-2 (Black Thunder Mine), and Buckskin Mine North Site.
Carbon monoxide (CO)	1-hour	Default 3 ppm	Default 3,600	9,000 ppb (10,000 $\mu g/m^3$)	Idaho DEQ, 2003, Default, Rural remote, non-agricultural
	8-hour	Default 2 ppm	Default 2,300	35,000 ppb (40,000 $\mu g/m^3$)	Idaho DEQ, 2003, Default, Rural remote, non-agricultural
Nitrogen dioxide (NO_2)	1-hour	9.8	18	100 ppb (188 $\mu g/m^3$)	Average of 98th percentile 1-hour values, 2010-2012, WY DEQ,Uinta County, UT, Murphy Ridge (UT/WY border), and Sublette County, WY, Wyoming Range/West Fontenelle
	Annual	2.3	4.3	53 ppb (100 $\mu g/m^3$)	Idaho DEQ, 2003, Default, Rural remote, non-agricultural
Sulfur dioxide (SO_2)	1-hour	18	47	75 ppb (196 $\mu g/m^3$)	Average of 99th percentile values, 2010-2012, WY DEQ, Sweetwater County, WY, CBSA Rock Springs, Moxa
	Annual	0.003	8	30 ppb (80 $\mu g/m^3$)	Idaho DEQ, 2003, Default, Rural remote, non-agricultural
Lead (Pb)	Rolling 3-month average	---	Default 0.03	0.15 $\mu g/m^3$	Default: Rural Agricultural

ppb = parts per billion by volume $\mu g/m^3$ = micrograms per cubic meter 1 sigma = σ = one standard deviation

"Default" values were taken from Hardy, Rick and Schilling, Kevin. *Background Concentrations for Use in New Source Review Dispersion Modeling.* Idaho DEQ, Memorandum to Mary Anderson, March 14, 2003.

3.0 Modeling Impact Assessment

3.1 Modeling Methodology

This section describes the modeling methods used by the applicant to demonstrate compliance with applicable air quality standards.

[1] Hardy, Rick and Schilling, Kevin. *Background Concentrations for Use in New Source Review Dispersion Modeling.* Memorandum to Mary Anderson, March 14, 2003.

3.1.1 Overview of Analyses

Air quality analyses using AERMOD were conducted in support of the submitted permit application. A brief description of parameters used in the modeling analyses is provided in Table 5.

Table 5. MODELING PARAMETERS		
Parameter	**Description/Values**	**Documentation/Addition Description**
Model	AERMOD	AERMOD with the PRIME downwash algorithm. RTP Environmental used version 12345. (AERMOD v. 13350 was not available until December 24, 2013)
Meteorological data	P4-Soda Springs 2004-2008	Onsite surface data collected at the P4 Plant north of Soda Springs supplemented by NWS surface data collected at the Pocatello Airport, with upper air soundings collected at the Boise Airport from 2004 through 2008.
Terrain	NED 1 arc-sec	AERMAP v. 11103, using NED terrain data files (NAD83/WGS84).
Building downwash	BPIP-PRIME v. 04274	Building downwash parameters were calculated using the BPIP PRIME algorithm (version 04274).
Receptor Grid	Receptors	Receptor locations were defined in UTM coordinates (NAD83)
	Grids	RTP Cartesian grids: 25-m spacing fence and Lanes Creek Road 25-m spacing outward from fence to 150 m 100-m spacing from 150 m out to 2,500 m (2.5 km) 250-m spacing from 2,500 m out to 5,000 m (5 km)

3.1.2 Modeling Protocol and Methodology

A modeling protocol was received electronically by DEQ on March 31, 2013. The protocol was approved with comments on May 20, 2013. An addendum was issued on November 4, 2013 to clarify that fugitives from roads needed to be included in the analyses. Final modeling conducted by RTP Environmental was conducted using methods described in the modeling guideline. Default rural dispersion was used.

3.1.3 Model Selection

Idaho Air Rules Section 202.02 requires that estimates of ambient concentrations be based on air quality models specified in 40 CFR 51, Appendix W (Guideline on Air Quality Models). The refined, steady state, multiple source, Gaussian dispersion model AERMOD was promulgated as the replacement model for ISCST3 in December 2005. EPA provided a one-year transition period during which either ISCST3 or AERMOD could be used at the discretion of the permitting agency. AERMOD must be used for all air impact analyses, performed in support of air quality permitting, conducted after November 2006.

AERMOD retains the single straight line trajectory of ISCST3, but includes more advanced algorithms to assess turbulent mixing processes in the planetary boundary layer for both convective and stable stratified layers.

AERMOD offers the following improvements over ISCST3:

- Improved dispersion in the convective boundary layer and the stable boundary layer.
- Improved plume rise and buoyancy calculations.
- Improved treatment of terrain effects on dispersion.
- New vertical profiles of wind, turbulence, and temperature.

3.1.4 Meteorological Data

DEQ recommended using an AERMOD-ready five-year data set for onsite surface data collected at the P4 Plant north of Soda Springs, supplemented by surface data collected at the Pocatello Airport for the years 2004-2008. Upper air soundings were collected at the Boise Airport for the same period.

3.1.5 Terrain Effects

Terrain effects on dispersion were considered in these analyses. AERMAP v. 11103 was used to extract the actual elevation of each receptor and determine the controlling hill height elevation from tiled files (1 arc-second, or about 30 m resolution) downloaded from the Seamless National Elevation Database (NED). The NED file encompassed the area between -111.195 and -114.430 degrees longitude and 42.744 and 42.925 degrees latitude.

3.1.6 Facility Layout

The location and layout of the proposed Lanes Creek Mine is shown in Figures 3-1a (RTP model setup exported to Google Earth by DEQ) and 3-1b (the computer-aided drafting (CAD) drawing provided in the RTP modeling memo).

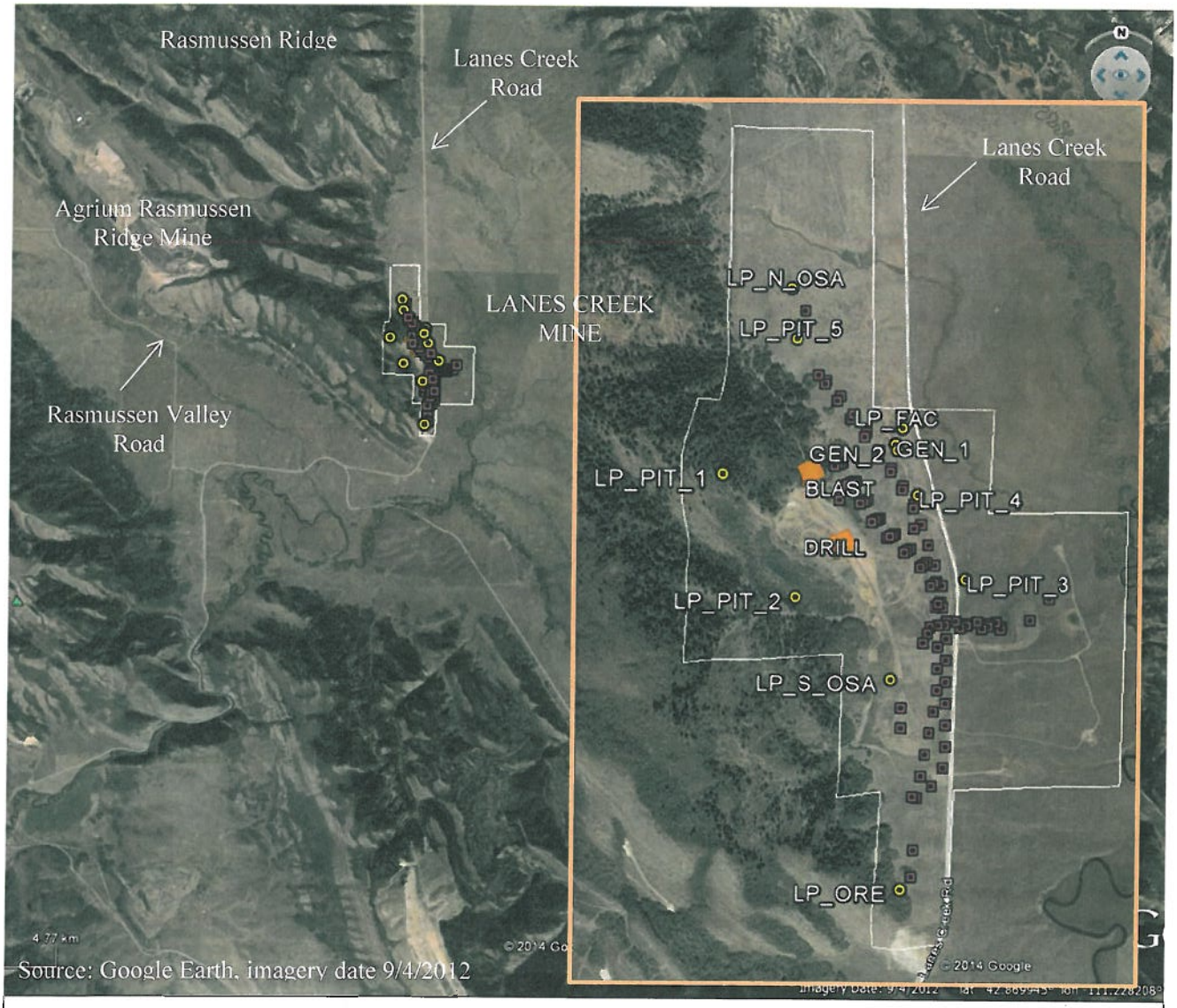

Figure 3-1a. LANES CREEK MINELOCATION

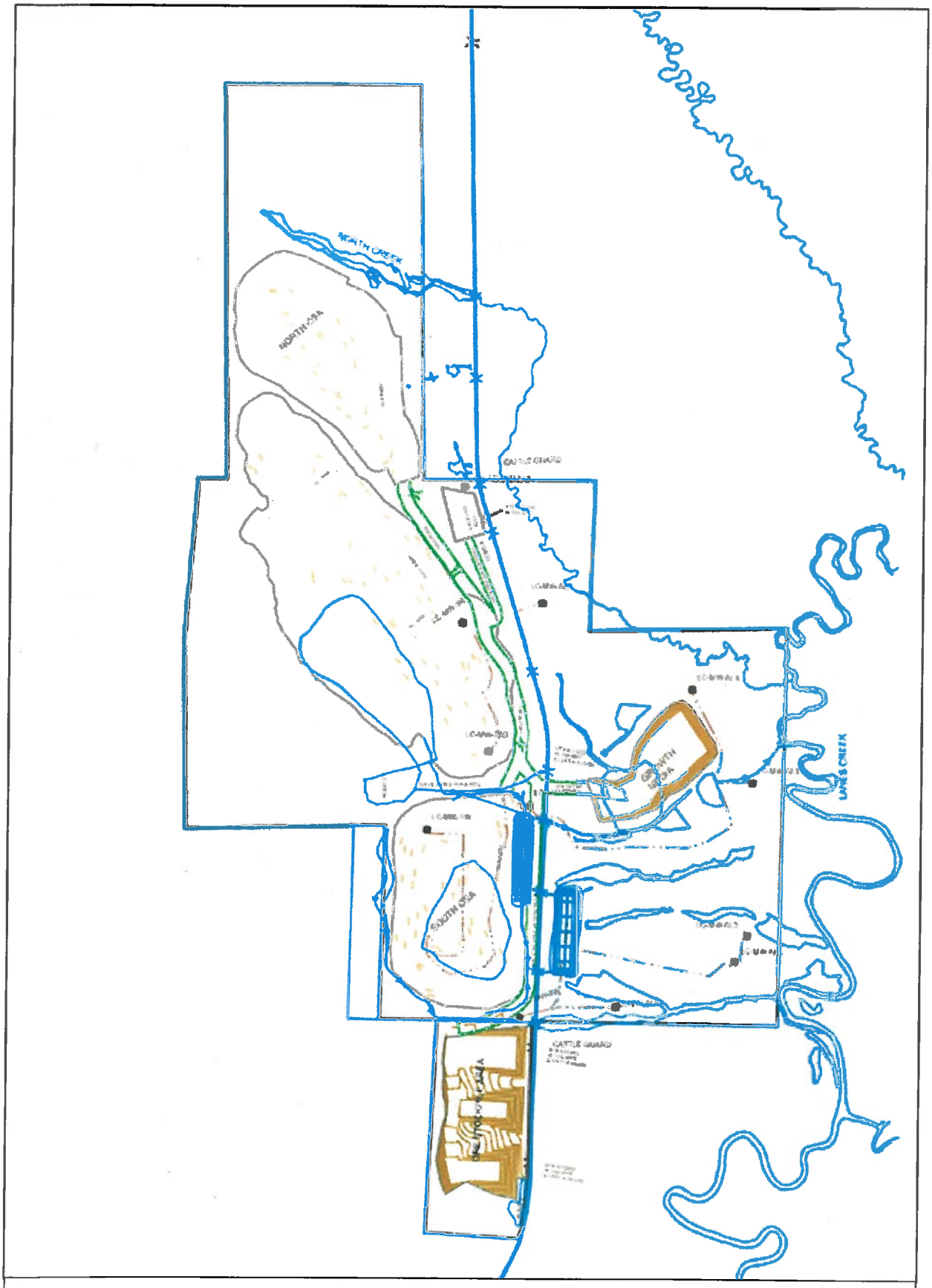

Figure 3-1b. LANES CREEK MINELAYOUT- CAD DRAWING

3.1.7 Building Downwash

Plume downwash effects on caused by structures that might be present at the facility were not accounted for in the submitted modeling analyses, based on an assertion that there are no buildings or other structures proposed to be constructed that would create aerodynamic downwash.

3.1.8 Ambient Air Boundary

Ambient air is defined in Section 006 of the Idaho Air Rules as "that portion of the atmosphere, external to buildings, to which the general public has access. Based on the description provided in the December 31, 2014 modeling report, public access to the mine site will be prevented by a fencing the entire boundary of the site, and rerouting all common roads and easements currently running through the property to locations outside the boundary of the mine. The boundary of the mine site is shown in Figures 3-1a and b. In accordance with DEQ modeling guidance, this access control is acceptable for PSD minor source permitting.

3.1.9 Receptor Network

The receptor grids used for the final modeling analyses are summarized in Table 5, and shown graphically in Figures 3-2a (Figure 4 from the RTP modeling report, showing the near-field receptor grid) and 3-2b (RTP model setup exported to Google Earth by DEQ).

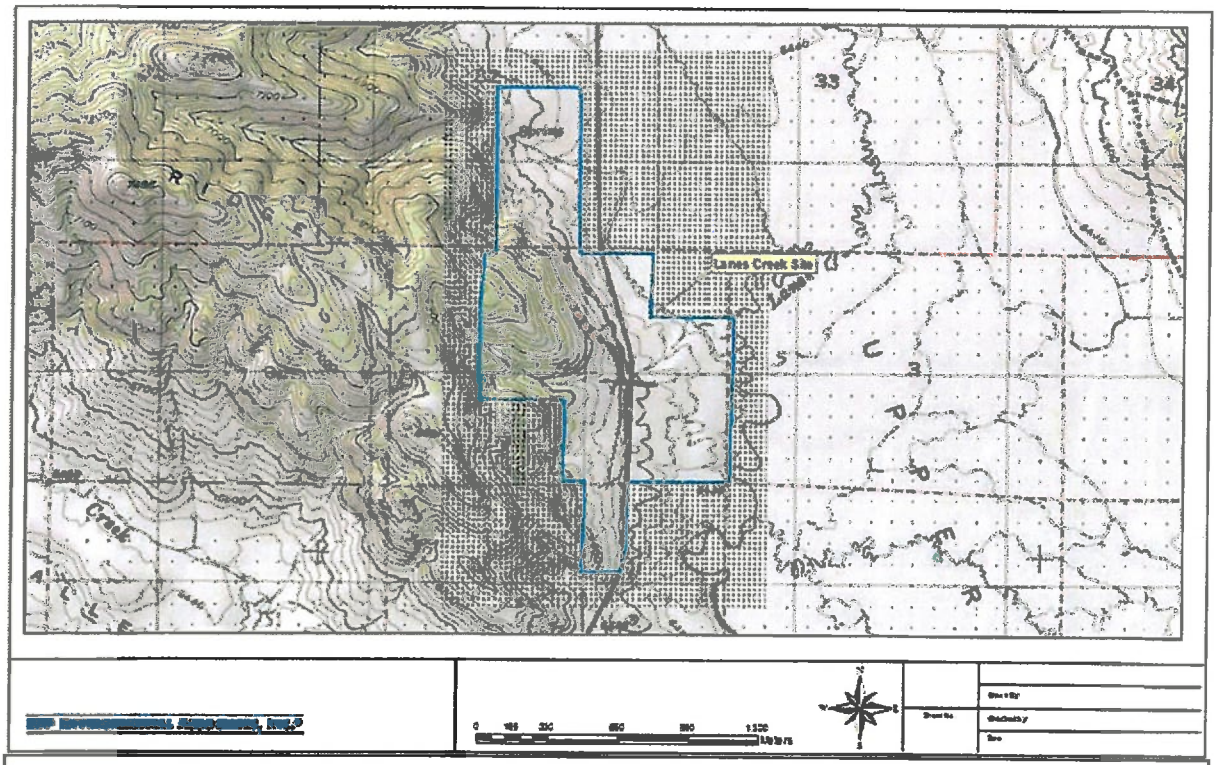

Figure 3-2a. NEAR-FIELD RECEPTOR GRID

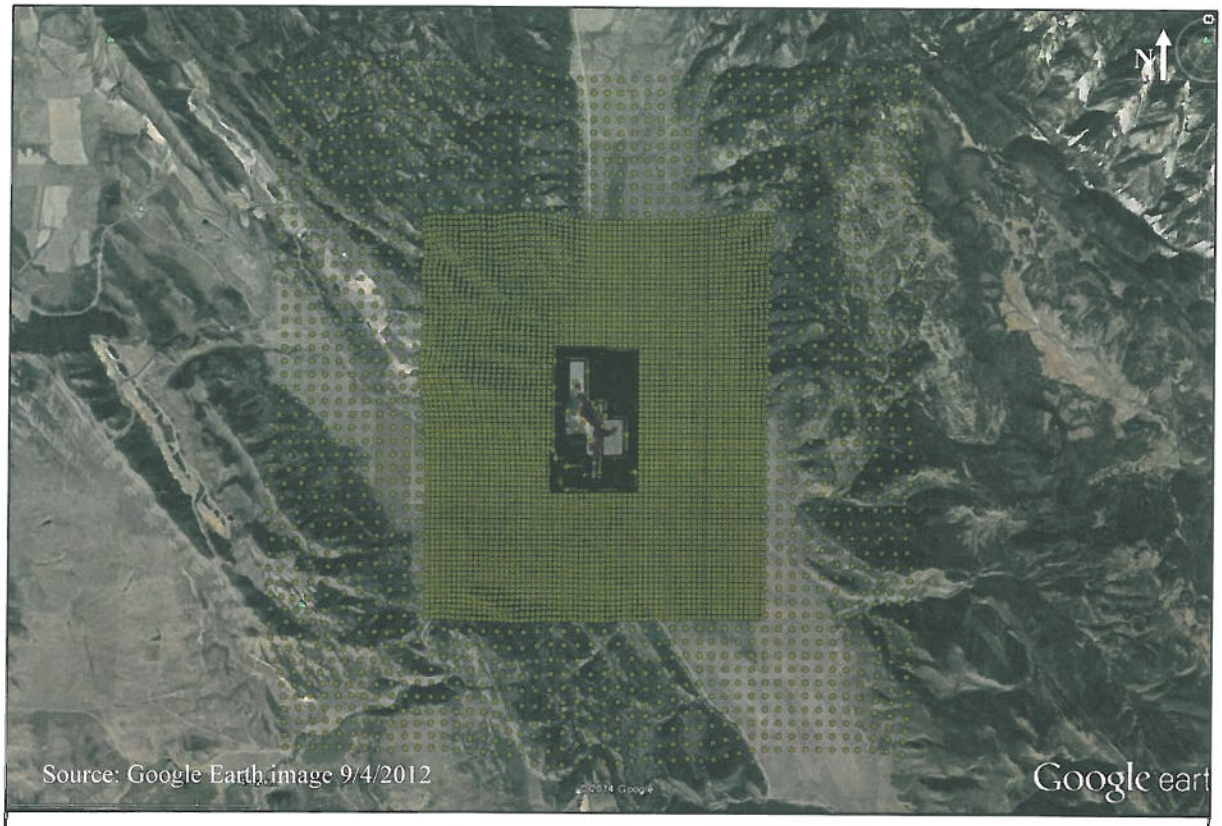

Figure 3-2b. RECEPTOR GRID

3.2 Emission Release Parameters and Hourly Emission Factors

3.2.1 Emission Release Parameters

The emissions release parameters used in the final RTP analyses are shown in Table 7.

Table 7. EMISSION RELEASE PARAMETERS

Source ID	Description	UTM Zone 12 (NAD83)		Base Elev (m)	Stack Height (AGL)	Exit Temp.	Exit Velocity (m/s)	Exit Diameter
		Easting (m)	Northing (m)					
Point Sources								
GEN_1	Diesel Generator	473972.24	4743666.04	1975.34	1.829 m (6 ft)	698.2 K (797°F)	46.6	0.104 m (4 in)
Gen_2	Diesel Generator	473977.92	4743648.99	1975.16	1.829 m (6 ft)	698.2 K (797°F)	46.6	0.104 m (4 in)
LP_ORE	Diesel Light Plant, Ore stockpile	473999.00	4742427.00	2011.40	1.212 m (4 ft)	699.8 K (800°F)	34.8	0.0274 m (1.1 in)
LP_FAC	Diesel Light Plant, Facilities Area	473991.18	4743712.13	1972.23	1.212 m (4 ft)	699.8 K (800°F)	34.8	0.0274 m (1.1 in)
LP_N_OSA	Diesel Light Plant, North OSA area	473677.00	4744105.00	1984.01	1.212 m (4 ft)	699.8 K (800°F)	34.8	0.0274 m (1.1 in)
LP_S_OSA	Diesel Light Plant, South OSA area	473967.28	4743004.79	2002.32	1.212 m (4 ft)	699.8 K (800°F)	34.8	0.0274 m (1.1 in)

Table 7. EMISSION RELEASE PARAMETERS								
Source ID	Description	UTM Zone 12 (NAD83)		Base Elev (m)	Stack Height (AGL)	Exit Temp.	Exit Velocity (m/s)	Exit Diameter
		Easting (m)	Northing (m)					
LP_PIT_1	Diesel Light Plant, Pit area-1	473549.00	4743567.00	2090.49	1.212 m (4 ft)	699.8 K (800°F)	34.8	0.0274 m (1.1 in)
LP_PIT_2	Diesel Light Plant, Pit area-2	473710.00	4743238.00	2026.68	1.212 m (4 ft)	699.8 K (800°F)	34.8	0.0274 m (1.1 in)
LP_PIT_3	Diesel Light Plant, Pit area-3	474175.00	4743282.00	1979.01	1.212 m (4 ft)	699.8 K (800°F)	34.8	0.0274 m (1.1 in)
LP_PIT_4	Diesel Light Plant, Pit area-4	474036.16	4743521.33	1979.96	1.212 m (4 ft)	699.8 K (800°F)	34.8	0.0274 m (1.1 in)
LP_PIT_5	Diesel Light Plant, Pit area-5	473695.00	4743960.00	1989.21	1.212 m (4 ft)	699.8 K (800°F)	34.8	0.0274 m (1.1 in)
Source ID	Description	UTM Zone 12 (NAD83)		Base Elev (m)	Release Height	Easterly by Northerly Length	Angle from North (degrees)	Initial Vertical Dimension (m)
		Easting (m)	Northing (m)					
Area Sources								
DRILL	Pit Drilling	473829.99	4743348.88	2041.91	10 m (32.81 ft)	52.8 x 52.8 m (173.2 ft)	-25°	1.0 m
BLAST	Pit Blasting	473744.18	4743543.86	2045.99	20 m (65.6 ft)	52.8 x 52.8 m (173.2 ft)	-25°	10.0 m

Table 7. EMISSION RELEASE PARAMETERS – VOLUME SOURCES							
Source ID	Description	UTM Zone 12 (NAD83)		Base Elev (m)	Release Height (AGL)	Initial Horizontal Dimension, σ_{yo} (m)	Initial Vertical Dimension, σ_{zo} (m)
		Easting (m)	Northing (m)				
RD1_0001	Pit to N. OSA Road - Segment 1	473835.64	4743608.09	2014.65	4.15 m (13.6 ft)	14.18	3.86
RD1_0002	Pit to N. OSA Road - Segment 2	473868.57	4743556.79	2008.39	4.15 m (13.6 ft)	14.18	3.86
RD1_0003	Pit to N. OSA Road - Segment 3	473901.50	4743505.49	2004.71	4.15 m (13.6 ft)	14.18	3.86
RD1_0004	Pit to N. OSA Road - Segment 4	473934.43	4743454.19	2003.73	4.15 m (13.6 ft)	14.18	3.86
RD1_0005	Pit to N. OSA Road - Segment 5	473976.46	4743411.12	2000.53	4.15 m (13.6 ft)	14.18	3.86
RD1_0006	Pit to N. OSA Road - Segment 6	474027.44	4743426.10	1989.55	4.15 m (13.6 ft)	14.18	3.86
RD1_0007	Pit to N. OSA Road - Segment 7	474024.17	4743483.24	1984.06	4.15 m (13.6 ft)	14.18	3.86
RD1_0008	Pit to N. OSA Road - Segment 8	473992.12	4743535.10	1984.14	4.15 m (13.6 ft)	14.18	3.86
RD1_0009	Pit to N. OSA Road - Segment 9	473959.55	4743586.60	1982.48	4.15 m (13.6 ft)	14.18	3.86
RD1_0010	Pit to N. OSA Road - Segment 10	473923.05	4743635.43	1983.94	4.15 m (13.6 ft)	14.18	3.86
RD1_0011	Pit to N. OSA Road - Segment 11	473886.56	4743684.26	1985.09	4.15 m (13.6 ft)	14.18	3.86
RD1_0012	Pit to N. OSA Road - Segment 12	473850.06	4743733.08	1991.74	4.15 m (13.6 ft)	14.18	3.86

Table 7. EMISSION RELEASE PARAMETERS – VOLUME SOURCES							
Source ID	Description	UTM Zone 12 (NAD83)		Base Elev (m)	Release Height (AGL)	Initial Horizontal Dimension, σ_{yo} (m)	Initial Vertical Dimension, σ_{zo} (m)
		Easting (m)	Northing (m)				
RD1_0013	Pit to N. OSA Road - Segment 13	473813.56	4743781.91	1996.28	4.15 m (13.6 ft)	14.18	3.86
RD1_0014	Pit to N. OSA Road - Segment 14	473777.07	4743830.74	1992.98	4.15 m (13.6 ft)	14.18	3.86
RD1_0015	Pit to N. OSA Road - Segment 15	473757.98	4743856.27	1989.86	4.15 m (13.6 ft)	14.18	3.86
RD2_0001	Pit to S. OSA Road - Segment 1	473816.27	4743597.04	2023.13	4.15 m (13.6 ft)	14.18	3.86
RD2_0002	Pit to S. OSA Road - Segment 2	473849.42	4743545.88	2015.44	4.15 m (13.6 ft)	14.18	3.86
RD2_0003	Pit to S. OSA Road - Segment 3	473882.57	4743494.72	2012.02	4.15 m (13.6 ft)	14.18	3.86
RD2_0004	Pit to S. OSA Road - Segment 4	473915.72	4743443.56	2011.82	4.15 m (13.6 ft)	14.18	3.86
RD2_0005	Pit to S. OSA Road - Segment 5	473956.92	4743399.35	2008.18	4.15 m (13.6 ft)	14.18	3.86
RD2_0006	Pit to S. OSA Road - Segment 6	474002.66	4743359.05	2003.11	4.15 m (13.6 ft)	14.18	3.86
RD2_0007	Pit to S. OSA Road - Segment 7	474047.04	4743317.65	1996.22	4.15 m (13.6 ft)	14.18	3.86
RD2_0008	Pit to S. OSA Road - Segment 8	474076.88	4743264.49	1991.66	4.15 m (13.6 ft)	14.18	3.86
RD2_0009	Pit to S. OSA Road - Segment 9	474091.61	4743206.81	1994.78	4.15 m (13.6 ft)	14.18	3.86
RD2_0010	Pit to S. OSA Road - Segment 10	474076.15	4743149.63	1993.02	4.15 m (13.6 ft)	14.18	3.86
RD2_0011	Pit to S. OSA Road - Segment 11	474055.61	4743105.25	1996.05	4.15 m (13.6 ft)	14.18	3.86
RD3_0001	Pit to Ore Stockpile - Segment 1	473824.60	4743602.63	2019.36	4.15 m (13.6 ft)	14.18	3.86
RD3_0002	Pit to Ore Stockpile - Segment 2	473857.59	4743551.36	2012.46	4.15 m (13.6 ft)	14.18	3.86
RD3_0003	Pit to Ore Stockpile - Segment 3	473890.58	4743500.10	2008.55	4.15 m (13.6 ft)	14.18	3.86
RD3_0004	Pit to Ore Stockpile - Segment 4	473923.57	4743448.84	2007.96	4.15 m (13.6 ft)	14.18	3.86
RD3_0005	Pit to Ore Stockpile - Segment 5	473963.68	4743403.88	2005.32	4.15 m (13.6 ft)	14.18	3.86
RD3_0006	Pit to Ore Stockpile - Segment 6	474010.51	4743364.85	1999.86	4.15 m (13.6 ft)	14.18	3.86
RD3_0007	Pit to Ore Stockpile - Segment 7	474055.15	4743323.93	1994.21	4.15 m (13.6 ft)	14.18	3.86
RD3_0008	Pit to Ore Stockpile - Segment 8	474086.79	4743271.83	1989.78	4.15 m (13.6 ft)	14.18	3.86
RD3_0009	Pit to Ore Stockpile - Segment 9	474100.11	4743214.59	1993.14	4.15 m (13.6 ft)	14.18	3.86
RD3_0010	Pit to Ore Stockpile - Segment 10	474100.11	4743153.63	1990.49	4.15 m (13.6 ft)	14.18	3.86
RD3_0011	Pit to Ore Stockpile - Segment 11	474099.26	4743092.68	1991.00	4.15 m (13.6 ft)	14.18	3.86

Table 7. EMISSION RELEASE PARAMETERS – VOLUME SOURCES							
Source ID	Description	UTM Zone 12 (NAD83)		Base Elev (m)	Release Height (AGL)	Initial Horizontal Dimension, σ_{yo} (m)	Initial Vertical Dimension, σ_{zo} (m)
		Easting (m)	Northing (m)				
RD3_0012	Pit to Ore Stockpile - Segment 12	474098.35	4743031.73	1990.70	4.15 m (13.6 ft)	14.18	3.86
RD3_0013	Pit to Ore Stockpile - Segment 13	474097.44	4742970.77	1989.62	4.15 m (13.6 ft)	14.18	3.86
RD3_0014	Pit to Ore Stockpile - Segment 14	474086.53	4742910.92	1989.88	4.15 m (13.6 ft)	14.18	3.86
RD3_0015	Pit to Ore Stockpile - Segment 15	474074.40	4742851.17	1991.21	4.15 m (13.6 ft)	14.18	3.86
RD3_0016	Pit to Ore Stockpile - Segment 16	474062.69	4742791.35	1993.75	4.15 m (13.6 ft)	14.18	3.86
RD3_0017	Pit to Ore Stockpile - Segment 17	474050.98	4742731.53	1995.17	4.15 m (13.6 ft)	14.18	3.86
RD3_0018	Pit to Ore Stockpile - Segment 18	474039.26	4742671.70	1996.90	4.15 m (13.6 ft)	14.18	3.86
RD4_0001	N. OSA to Growth Pile - Segment 1	473779.54	4743840.80	1990.67	4.15 m (13.6 ft)	14.18	3.86
RD4_0002	N. OSA to Growth Pile - Segment 2	473821.19	4743796.29	1991.73	4.15 m (13.6 ft)	14.18	3.86
RD4_0003	N. OSA to Growth Pile - Segment 3	473856.40	4743746.56	1987.86	4.15 m (13.6 ft)	14.18	3.86
RD4_0004	N. OSA to Growth Pile - Segment 4	473891.26	4743696.55	1983.13	4.15 m (13.6 ft)	14.18	3.86
RD4_0005	N. OSA to Growth Pile - Segment 5	473926.12	4743646.54	1982.43	4.15 m (13.6 ft)	14.18	3.86
RD4_0006	N. OSA to Growth Pile - Segment 6	473960.98	4743596.53	1981.19	4.15 m (13.6 ft)	14.18	3.86
RD4_0007	N. OSA to Growth Pile - Segment 7	473994.97	4743545.94	1982.78	4.15 m (13.6 ft)	14.18	3.86
RD4_0008	N. OSA to Growth Pile - Segment 8	474026.92	4743494.21	1982.95	4.15 m (13.6 ft)	14.18	3.86
RD4_0009	N. OSA to Growth Pile - Segment 9	474047.53	4743436.84	1986.23	4.15 m (13.6 ft)	14.18	3.86
RD4_0010	N. OSA to Growth Pile - Segment 10	474068.14	4743379.47	1985.64	4.15 m (13.6 ft)	14.18	3.86
RD4_0011	N. OSA to Growth Pile - Segment 11	474088.75	4743322.10	1987.73	4.15 m (13.6 ft)	14.18	3.86
RD4_0012	N. OSA to Growth Pile - Segment 12	474109.37	4743264.73	1986.58	4.15 m (13.6 ft)	14.18	3.86
RD4_0013	N. OSA to Growth Pile - Segment 13	474111.56	4743204.23	1991.37	4.15 m (13.6 ft)	14.18	3.86
RD4_0014	N. OSA to Growth Pile - Segment 14	474148.09	4743163.43	1985.65	4.15 m (13.6 ft)	14.18	3.86
RD4_0015	N. OSA to Growth Pile - Segment 15	474209.02	4743161.48	1982.44	4.15 m (13.6 ft)	14.18	3.86
RD4_0016	N. OSA to Growth Pile - Segment 16	474261.47	4743159.81	1979.46	4.15 m (13.6 ft)	14.18	3.86
RD4_0017	N. OSA to Growth Pile - Segment 17	473831.14	4743604.73	2016.80	4.15 m (13.6 ft)	14.18	3.86
RD5_0001	Pit to Growth Pile - Segment 1	473863.64	4743553.16	2010.30	4.15 m (13.6 ft)	14.18	3.86

Table 7. EMISSION RELEASE PARAMETERS – VOLUME SOURCES							
Source ID	Description	UTM Zone 12 (NAD83)		Base Elev (m)	Release Height (AGL)	Initial Horizontal Dimension, σ_{yo} (m)	Initial Vertical Dimension, σ_{zo} (m)
		Easting (m)	Northing (m)				
RD5_0002	Pit to Growth Pile - Segment 2	473896.14	4743501.58	2006.75	4.15 m (13.6 ft)	14.18	3.86
RD5_0003	Pit to Growth Pile - Segment 3	473929.21	4743450.39	2005.61	4.15 m (13.6 ft)	14.18	3.86
RD5_0004	Pit to Growth Pile - Segment 4	473970.85	4743406.45	2002.87	4.15 m (13.6 ft)	14.18	3.86
RD5_0005	Pit to Growth Pile - Segment 5	474019.31	4743369.51	1996.79	4.15 m (13.6 ft)	14.18	3.86
RD5_0006	Pit to Growth Pile - Segment 6	474064.99	4743330.43	1991.39	4.15 m (13.6 ft)	14.18	3.86
RD5_0007	Pit to Growth Pile - Segment 7	474093.19	4743276.38	1988.62	4.15 m (13.6 ft)	14.18	3.86
RD5_0008	Pit to Growth Pile - Segment 8	474106.20	4743218.61	1991.84	4.15 m (13.6 ft)	14.18	3.86
RD5_0009	Pit to Growth Pile - Segment 9	474123.55	4743164.84	1987.98	4.15 m (13.6 ft)	14.18	3.86
RD5_0010	Pit to Growth Pile - Segment 10	474181.34	4743156.66	1983.75	4.15 m (13.6 ft)	14.18	3.86
RD5_0011	Pit to Growth Pile - Segment 11	474242.30	4743156.03	1981.02	4.15 m (13.6 ft)	14.18	3.86
RD5_0012	Pit to Growth Pile - Segment 12	474069.45	4743131.36	1994.08	4.15 m (13.6 ft)	14.18	3.86
RD6_0001	S OSA to Growth Pile - Segment 1	474117.78	4743153.97	1988.54	4.15 m (13.6 ft)	14.18	3.86
RD6_0002	S OSA to Growth Pile - Segment 2	474178.69	4743151.37	1984.00	4.15 m (13.6 ft)	14.18	3.86
RD6_0003	S OSA to Growth Pile - Segment 3	474239.59	4743148.76	1981.57	4.15 m (13.6 ft)	14.18	3.86
RD6_0004	S OSA to Growth Pile - Segment 4	474275.95	4743147.20	1978.65	4.15 m (13.6 ft)	14.18	3.86
RD6_0005	S OSA to Growth Pile - Segment 5	474028.18	4742674.99	1997.65	4.15 m (13.6 ft)	14.18	3.86
RD7_0001	Ore Stockpile to Growth Pile - Seg 1	474082.89	4742701.87	1992.29	4.15 m (13.6 ft)	14.18	3.86
RD7_0002	Ore Stockpile to Growth Pile - Seg 2	474115.25	4742751.50	1988.89	4.15 m (13.6 ft)	14.18	3.86
RD7_0003	Ore Stockpile to Growth Pile - Seg 3	474122.10	4742810.71	1988.29	4.15 m (13.6 ft)	14.18	3.86
RD7_0004	Ore Stockpile to Growth Pile - Seg 4	474121.56	4742871.66	1988.62	4.15 m (13.6 ft)	14.18	3.86
RD7_0005	Ore Stockpile to Growth Pile - Seg 5	474121.02	4742932.62	1987.84	4.15 m (13.6 ft)	14.18	3.86
RD7_0006	Ore Stockpile to Growth Pile - Seg 6	474121.26	4742993.58	1988.56	4.15 m (13.6 ft)	14.18	3.86
RD7_0007	Ore Stockpile to Growth Pile - Seg 7	474121.75	4743054.54	1988.53	4.15 m (13.6 ft)	14.18	3.86
RD7_0008	Ore Stockpile to Growth Pile - Seg 8	474122.70	4743115.49	1988.61	4.15 m (13.6 ft)	14.18	3.86
RD7_0009	Ore Stockpile to Growth Pile - Seg 9	474161.17	4743144.76	1985.26	4.15 m (13.6 ft)	14.18	3.86

Table 7. EMISSION RELEASE PARAMETERS – VOLUME SOURCES							
Source ID	Description	UTM Zone 12 (NAD83)		Base Elev (m)	Release Height (AGL)	Initial Horizontal Dimension, σ_{yo} (m)	Initial Vertical Dimension, σ_{zo} (m)
		Easting (m)	Northing (m)				
RD7_0010	Ore Stockpile to Growth Pile - Seg 10	474222.07	4743141.98	1982.79	4.15 m (13.6 ft)	14.18	3.86
RD7_0011	Ore Stockpile to Growth Pile - Seg 11	474274.34	4743139.60	1979.01	4.15 m (13.6 ft)	14.18	3.86
N_OSA_P	North OSA Pile	473717.69	4744039.28	1986.16	41.2 m (135 ft)	85.1 m	19.14 m
S_OSA_P	South OSA Pile	473994.51	4742866.66	1995.37	35.1 m (115 ft)	85.1 m	16.3 m
ORE_P	Ore Pile	474027.15	4742456.12	2003.51	13.7 m (45 ft)	45.1 m	6.38 m
GRWTH_P	Growth Media Pile	474411.96	4743225.56	1973.52	7.62 m (25 ft)	42.5 m	3.55 m
N_OSA_T	North OSA Truck Load/Unload	473718.21	4743994.03	1987.49	4.27 m (14 ft)	2.48 m	0.963 m
S_OSA_T	South OSA Truck Load/Unload	473994.45	4742922.39	1994.75	4.27 m (14 ft)	2.48 m	0.963 m
ORE_T	Ore Truck Load/Unload	474031.84	4742528.33	2001.18	4.27 m (14 ft)	2.48 m	0.963 m
GRWTH_T	Growth Media Truck Load/Unload	474357.13	4743165.04	1976.00	4.27 m (14 ft)	2.48 m	0.963 m
PIT_T	Pit Truck Loading	473831.52	4743502.99	2026.60	4.27 m (14 ft)	2.48 m	0.963 m

m = meters ft = feet m/sec = meters per second °F = degrees Fahrenheit K = Kelvin

3.3 Emission Rates

3.3.1 Compare Emissions to DEQ Modeling Thresholds

The emissions increases shown in Table 9 were taken from the 11-20-13 RTP emissions inventory. As shown in Table 9, a comparison of the increase in emissions associated with this project with DEQ's Level II modeling thresholds shows that modeling is required only for emissions of 24-hr PM_{10}, 24-hr and annual $PM_{2.5}$, and 1-hr and annual NO_x.

Table 9. COMPARISION OF EMISSIONS INCREASE WITH DEQ MODELING THRESHOLDS												
Emission Sources	PM_{10}		$PM_{2.5}$		SO_2		NO_x		CO		VOC	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
GEN_1 Diesel Generator	0.105	0.23	0.105	0.23	0.41	1.78	1.22	5.35	0.306	1.34	1.22	5.4
GEN_2 Diesel Generator	0.105	0.23	0.105	0.23	0.41	1.78	1.22	5.35	0.306	1.34	1.22	5.4
LP_ORE, Diesel Light Plant (ore stockpile)	0.019	0.041	0.019	0.041	0.029	0.126	0.17	0.76	0.15	0.66	0.173	0.76
LP_FAC, Diesel Light Plant (facilities area)	0.019	0.041	0.019	0.041	0.029	0.126	0.17	0.76	0.15	0.66	0.173	0.76
LP_N_OSA, Diesel Light Plant (north OSA area)	0.019	0.041	0.019	0.041	0.029	0.126	0.17	0.76	0.15	0.66	0.173	0.76
LP_S_OSA, Diesel Light Plant (south OSA area)	0.019	0.041	0.019	0.041	0.029	0.126	0.17	0.76	0.15	0.66	0.173	0.76

Table 9. COMPARISION OF EMISSIONS INCREASE WITH DEQ MODELING THRESHOLDS												
Emission Sources	**PM_{10}**		**$PM_{2.5}$**		**SO_2**		**NO_x**		**CO**		**VOC**	
	lb/hr	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**	**lb/hr**	**T/yr**
LP_PIT_1, Diesel Light Plant (pit area -1)	0.019	0.041	0.019	0.041	0.029	0.126	0.17	0.76	0.15	0.66	0.173	0.76
LP_PIT_2, Diesel Light Plant (pit area -2)	0.019	0.041	0.019	0.041	0.029	0.126	0.17	0.76	0.15	0.66	0.173	0.76
LP_PIT_3, Diesel Light Plant (pit area -3)	0.019	0.041	0.019	0.041	0.029	0.126	0.17	0.76	0.15	0.66	0.173	0.76
LP_PIT_4, Diesel Light Plant (pit area -4)	0.019	0.041	0.019	0.041	0.029	0.126	0.17	0.76	0.15	0.66	0.173	0.76
LP_PIT_5, Diesel Light Plant (pit area -5)	0.019	0.041	0.019	0.041	0.029	0.126	0.17	0.76	0.15	0.66	0.173	0.76
Diesel Tank	----	----	----	----	----	----	----	----	----	----	0.002	0.01
Point Sources Subtotal	**0.38**	**0.82**	**0.38**	**0.82**	**1.07**	**4.69**	**4.00**	**17.52**	**1.97**	**8.64**	**4.00**	**17.5**
Blasting	6.3	1.9	0.36	0.11	0.41	1.80	3.49	15.30	13.8	60.3	----	----
Drilling	0.77	1.61	0.43	0.90	----	----	----	----	----	----	----	----
Haul Roads	6.56	14.4	0.66	1.44	----	----	----	----	----	----	----	----
North OSA Pile	0.77	1.69	0.12	0.25	----	----	----	----	----	----	----	---
South OSA Pile	0.77	1.69	0.12	0.25	----	----	----	----	----	----	----	----
Ore Stock Pile	1.51	3.31	0.23	0.50	----	----	----	----	----	----	----	----
Growth Media Pile	0.28	0.62	0.042	0.093	----	----	----	----	----	----	----	----
North OSA Truck Load/Unload	0.19	0.42	0.029	0.063	----	----	----	----	----	----	----	----
South OSA Truck Load/Unload	0.21	0.46	0.032	0.069	----	----	----	----	----	----	----	----
Ore Stock Pile Truck Load/Unload	0.052	0.23	0.008	0.034	----	----	----	----	----	----	----	----
Growth Media Truck Load/Unload	0.059	0.13	0.009	0.020	----	----	----	----	----	----	----	----
Pit Truck Loading	0.058	0.13	0.009	0.019	----	----	----	----	----	----	----	----
Fugitive Sources Subtotal	**17.5**	**26.5**	**2.04**	**3.75**	**0.41**	**1.80**	**3.49**	**15.30**	**13.77**	**60.3**	----	----
TOTAL	**17.9**	**27.4**	**2.42**	**4.6**	**1.5**	**6.5**	**7.5**	**32.8**	**15.7**	**68.9**		
DEQ Level II Thresholds	2.6	---	0.63	4.1	2.5	14	2.4	14	175	---	---	---
Modeling Required?	**Yes**	---	**Yes**	**Yes**	No	No	**Yes**	**Yes**	No	No	---	---

3.3.2 *Modeled Emission Rates – Criteria Pollutants and TAPs*

Significant impact analyses were not conducted. Modeled emission rates for the full impact and TAPs analyses conducted by RTP are shown in Table 10. As shown in the table, annual ambient impacts were based on operating at hourly emission rates for 8,760 hours per year for all sources.

Table 10. MODELED EMISSION RATES (lb/hr)

Emission Sources	PM_{10}	$PM_{2.5}$		NO_x		Arsenic (As)	Cadmium (Cd)	Iron (Fe)	Nickel (Ni)
	24-hr	24-hr	Annual	1-hr	Annual	Annual	Annual	24-hr	Annual
GEN_1 Diesel Generator	0.105	0.105	0.105	1.22	1.22	----	----	----	----
GEN_2 Diesel Generator	0.105	0.105	0.105	1.22	1.22	----	----	----	----
LP_ORE, Diesel Light Plant (ore stockpile)	0.019	0.019	0.019	0.17	0.17	----	----	----	----
LP_FAC, Diesel Light Plant (facilities area)	0.019	0.019	0.019	0.17	0.17	----	----	----	----
LP_N_OSA, Diesel Light Plant (north OSA area)	0.019	0.019	0.019	0.17	0.17	----	----	----	----
LP_S_OSA, Diesel Light Plant (south OSA area)	0.019	0.019	0.019	0.17	0.17	----	----	----	----
LP_PIT_1, Diesel Light Plant (pit area -1)	0.019	0.019	0.019	0.17	0.17	----	----	----	----
LP_PIT_2, Diesel Light Plant (pit area -2)	0.019	0.019	0.019	0.17	0.17	----	----	----	----
LP_PIT_3, Diesel Light Plant (pit area -3)	0.019	0.019	0.019	0.17	0.17	----	----	----	----
LP_PIT_4, Diesel Light Plant (pit area -4)	0.019	0.019	0.019	0.17	0.17	----	----	----	----
LP_PIT_5, Diesel Light Plant (pit area -5)	0.019	0.019	0.019	0.17	0.17	----	----	----	----
Diesel Tank	----	----	----	----	----	----	----	----	----
BLAST, Blasting	6.3	0.36	0.36	3.49	3.49	----	----	----	----
DRILL, Drilling	0.77	0.43	0.43	----	----	----	----	----	----
RD_1, Pit to N. OSA Rd, per segment, 15 segments	0.185	0.0185	0.0185	----	----	4.55E-07	7.86E-07	0.00168	4.36E-06
RD_2, Pit to S. OSA Rd, per segment, 11 segments	0.194	0.0194	0.0194	----	----	4.78E-07	8.25E-07	0.00176	4.57E-06
RD_3, Pit to Ore Stockpile, per segment, 18 segments	0.0559	0.00559	0.00559	----	----	4.78E-07	8.25E-07	0.00176	4.57E-06
RD_4, N. OSA to Growth Pile, per segment, 17 segments	0.0121	0.00121	0.00121	----	----	2.99E-08	5.15E-08	1.10E-04	2.86E-07
RD_5, Pit to Growth Pile, per segment, 12 segments	0.0203	0.00203	0.00203	----	----	5.01E-08	8.65E-08	1.84E-04	4.79E-07
RD_6, S. OSA to Growth Pile, per segment, 5 segments	0.0102	0.00102	0.00102	----	----	2.50E-08	4.32E-08	9.22E-05	2.40E-07
RD_7, Ore Stockpile to Growth Pile, per segment, 11 segments	0.0132	0.00132	0.00132	----	----	3.25E-08	5.60E-08	1.19E-04	3.11E-07

Table 10. MODELED EMISSION RATES (lb/hr)									
Emission Sources	PM_{10}	$PM_{2.5}$		NO_x		Arsenic (As)	Cadmium (Cd)	Iron (Fe)	Nickel (Ni)
	24-hr	24-hr	Annual	1-hr	Annual	Annual	Annual	24-hr	Annual
N_OSA_P, North OSA Pile	0.77	0.116	0.116	----	----	1.90E-06	3.27E-06	0.00698	1.81E-05
S_OSA_P, South OSA Pile	0.77	0.116	0.116	----	----	8.10E-06	1.15E-05	0.010	8.15E-05
ORE_P, Ore Stock Pile	1.51	0.227	0.227	----	----	1.02E-05	9.41E-05	0.00957	1.01E-04
GRWTH_P, Growth Media Pile	0.282	0.0425	0.0425	----	----	9.88E-07	3.67E-06	0.00368	1.61E-05
N_OSA_T, North OSA Truck Load/Unload	0.330	0.050	0.050	----	----	4.67E-07	8.06E-07	0.00172	4.47E-06
S_OSA_T, South OSA Truck Load/Unload	0.364	0.0551	0.0551	----	----	2.20E-06	3.13E-06	0.00272	2.21E-05
ORE_T, Ore Stock Pile Truck Load/Unload	0.175	0.0266	0.0266	----	----	6.99E-07	6.45E-06	6.56E-04	6.90E-06
GRWTH_T, Growth Media Truck Load/Unload	0.059	0.00893	0.00893	----	----	2.06E-07	7.67E-07	7.70E-04	3.36E-06
PIT_T, Pit Truck Loading	0.0935	0.0142	0.0142	----	----	6.07E-07	3.59E-06	7.52E-04	6.11E-06

3.4 Modeling Results

The modeled ambient impacts for criteria pollutant emissions are shown in Table 11.

Table 11. FULL IMPACT MODELING RESULTS						
Pollutant	Averaging Period	Modeled Ambient Impact ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Concentration ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)	Percent of NAAQS
PM_{10}	24-hr	80.0	43	123	150	82%
$PM_{2.5}$	24-hr	8.3	16	24.3	35	69%
	Annual	4.0	5.2	9.2	12	77%
NO_2	1-hr	*148.1 x 0.80* = 118.5	18	137	188	73%
	Annual	*12.08 x 0.75* = 9.06	4.3	13.4	100	13%

Modeled ambient impacts from emissions of TAPs are shown in Table 12.

Table 12. TAPs MODELING RESULTS				
Pollutant	Averaging Period	Modeled Ambient Impact ($\mu g/m^3$)	AAC/ AACC ($\mu g/m^3$)	Percent of AAC/AACC
Arsenic	Annual	8.0E-05	2.3E-04	35%
Cadmium	Annual	3.7E-04	5.6E-04	66%
Iron	24-hr	0.79	50	2%
Nickel	Annual	7.6E-04	4.2E-03	18%

4.0 Conclusions

The submitted ambient air impact analyses demonstrated to DEQ's satisfaction that emissions from sources operated at this mine site will not cause or significantly contribute to a violation of any air quality standard.

Appendix E – Public Comments

IDAHO MINING ASSOCIATION
P.O. Box 1660 • Boise, ID 83701
208.342.0031 • ima@idahomining.org

June 5, 2014

Tessa Stevens
Air Quality Division
DEQ State Office
1410 N. Hilton
Boise, ID 83706-1255
Email: tessa.stevens@deq.idaho.gov

Dear Ms. Stevens:

The Idaho Mining Association has over 60 members and represents mining companies engaged in mineral exploration, development, processing and reclamation throughout the state of Idaho as well as companies that provide products and services to the industry. IMA submits these comments in support of the application for a Permit to Construct filed by Nu-West Industries, Inc. (dba Agrium), an IMA member (Docket No. AQ-1410).

The permit relates to drilling and blasting, mining, material transfer, loading, unloading, hauling, and storage plant operations; as well as the use of generators; and an aboveground fuel storage tank for Agrium's proposed Lanes Creek Mine. The department's Notice of Public Comment states DEQ "has determined that construction and operation according to the proposed permit will not cause or significantly contribute to a violation of any ambient air quality standard and will not injure or unreasonably affect human or animal life or vegetation." Given that finding, it is appropriate and desirable for the department to issue the permit.

Agrium is a major employer in southeastern Idaho, and a significant driver of the economy in that area of the state. Additionally, the fertilizer products it produces are important to the agricultural sector and, more generally, to the nation as a

whole as fertilizer is needed to produce the food required to feed the nation and a growing worldwide population.

The Lanes Creek Mine is important to Agrium's operation because the ore from this mine will be used to supplement the ore from their current mine while the permitting of other mines is taking place. Without the ore from the Lanes Creek Mine, it may be difficult for Agrium to continue full-scale operation until new sources of ore could be permitted and the mines developed.

I appreciate the opportunity to comment on the permit application, and appreciate your consideration of these comments.

Sincerely,

Jack Lyman

Jack Lyman
Executive Vice President