LANDAU ASSOCIATES

Notice of Construction Application Supporting Information Report

J.R. Simplot Project Rainier Facility
Grant County, Washington

December 9, 2024

Prepared for

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Grant County, Washington

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Date:	December 9, 2024
Project No.:	0313002.020
File path:	p:\313\002.020\r\noc application_2024-09-16\landau_simplot noc supporting information_rpt - 12-9-2024.docx
Project Coordinator:	KEE

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LIST OF ABBREVIATIONS AND ACRONYMS

$\mu g/m^3$	micrograms per cubic meter
AERMOD	AMS/EPA regulatory model
AHU	air-handling unit
AMS	American Meteorological Society
ASIL	acceptable source impact levels
BACT	best available control technology
BPIP	Building Profile Input Program
CARB	California Air Resources Board
CAS	Chemical Abstracts Service
CATEF	California Air Toxics Emission Factor
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CI	compression ignition
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CO_4	methane
DEEP	diesel engine exhaust particulate matter
DMBA	Dimethylbenz(a)anthracene
dscf	dry standard cubic feet
Ecology	Washington State Department of Ecology
EGEN	emergency generator
EPA	US Environmental Protection Agency
°F	degrees Fahrenheit
Facility	Simplot Rainier potato-processing facility
ft	feet/foot
ft/min	feet per minute
FWP	firewater pump
GHG	greenhouse gas
GWP	Global Warming Potential
H_2S	hydrogen sulfide
HAP	hazardous air pollutant
hp	horsepower
HHV	higher heating value
IDEQ	Idaho Department of Environmental Quality
in	inches
km	kilometer
KMWH	Grant County Airport

LIST OF ABBREVIATIONS AND ACRONYMS (Continued)

LAER ..... lowest achievable emission rate
Landau ..... Landau Associates, Inc.
lb/avg. period ..... pounds per averaging period
lb/hr ..... pounds per hour
lb/MMscf ..... pounds of pollutant per million standard cubic feet
lb/yr ..... pounds per year
LNB ..... low-NO_X burner
m ..... meters
MCR ..... maximum capacity rating
MDNS ..... mitigated determination of non-significance
MMBtu/hr ..... British thermal units per hour
MRLC ..... Multi-Resolution Land Characteristics
N_2O ..... nitrous oxide
NAAQS ..... National Ambient Air Quality Standards
NED ..... National Elevation Dataset
NESHAP ..... National Emission Standards for Hazardous Air Pollutants
NLCD ..... National Land Cover Database
NO_2 ..... nitrogen dioxide
NOC ..... Notice of Construction
NO_X ..... oxides of nitrogen
NSPS ..... New Source Performance Standards
O_2 ..... Oxygen
Permit ..... Approval Order No. 23AQ-E016
PM ..... particulate matter
$PM_{2.5}$ ..... PM with an aerodynamic diameter less than or equal to 2.5 microns
PM_{10} ..... PM with an aerodynamic diameter less than or equal to 10 microns
ppm ..... parts per million
ppmv ..... parts per million by volume
ppmvd ..... parts per million by volume, dry basis
PRIME ..... plume rise model enhancement
PSD ..... Prevention of Significant Deterioration
RACT ..... reasonably available control technology
RBLC ..... RACT/BACT/LAER Clearinghouse
RICE ..... reciprocating internal combustion engine
RTO ..... regenerative thermal oxidizer
SEPA ..... State Environmental Policy Act
SIL ..... significant impact level
Simplot ..... J.R. Simplot Company

LIST OF ABBREVIATIONS AND ACRONYMS (Continued)

SO_2 ..... sulfur dioxide
SQER ..... small-quantity emission rate
S_y ..... Sigma Y
S_z ..... Sigma Z
TAP ..... toxic air pollutant
tBACT ..... best available control technology for toxic air pollutants
tpd ..... tons per day
tpy ..... tons per year
U* ..... surface friction velocity
ULNB ..... ultra-low-NO_X burner
USGS ..... US Geological Survey
VCAPCD ..... California's Ventura County Air Pollution Control District
VOC ..... volatile organic compound
WAAQS ..... Washington Ambient Air Quality Standards
WAC ..... Washington Administrative Code
WESP ..... wet electrostatic precipitator

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1.0 INTRODUCTION

1.1 Background

The J.R. Simplot Company (Simplot) is proposing to construct and operate a new potato-processing facility near Moses Lake, Washington (Facility). A Notice of Construction (NOC) application was submitted to the Washington State Department of Ecology (Ecology) for the original project in May 2023, and a permit (Approval Order No. 23AQ-E016; Permit) was issued by Ecology on November 8, 2023. This NOC application requests revisions to the Permit that will allow the Facility to be constructed and operated in ways that differ from the descriptions and assumptions in the original NOC application.

This NOC application includes descriptions of equipment and operations, as well as assumptions that were not included in the original May 2023 NOC application and were therefore not reviewed by Ecology. Because this revision request has been submitted relatively soon after the Permit was issued, it includes emissions attributable to the original project, as well as those attributable to the new equipment, operations, and assumptions, rather than incremental emission increases. Simplot requests that Ecology review the updated project as described in this NOC application supporting information report and revise the Permit to incorporate the new equipment, operations, and assumptions. The Facility's expected potential-to-emit following implementation of the revisions described in this document will not exceed the Prevention of Significant Deterioration (PSD) major source threshold, meaning the Facility continues to not be subject to review under the PSD program. Simplot has retained Landau Associates, Inc. (Landau) to prepare this NOC application on its behalf.

1.2 Organization

The key components of this NOC application supporting information report are as follows:

- A description of the Facility following implementation of the currently requested revisions
- Expected criteria pollutant and toxic air pollutant (TAP) emissions attributable to the Facility following implementation of the currently requested revisions
- A discussion of potentially applicable air quality regulations
- An analysis of Best Available Control Technology (BACT) for criteria pollutants and TAPs (tBACT)
- An assessment of compliance with ambient air quality standards
- An assessment of compliance with applicable TAP regulations.

Completed and signed NOC application forms are provided in Appendix A. A process flow diagram updated to reflect the currently requested revisions is provided in Appendix B. Detailed project emission calculations updated to reflect the currently requested revisions are provided in Appendix C. All modeling files developed in support of this updated NOC application are available upon request.

1.3 Summary of Findings

A regulatory review was performed to assess the applicability of federal and state air quality regulations to the Facility following implementation of the currently requested revisions, as well as the likelihood the Facility will operate in compliance with the identified applicable regulations. Analyses of emission reduction alternatives were prepared to propose BACT and tBACT for new emission units associated with this Permit revision request. Air dispersion modeling was conducted to assess compliance with ambient air quality standards and to predict ambient TAP concentration increases for comparison with regulatory screening thresholds. In summary, the results of these analyses indicate that the following will occur:

- The Facility will continue to comply with all applicable federal and state air quality regulations.
- All new emission units associated with the currently requested revision will employ BACT and tBACT for all criteria pollutants and applicable TAPs, respectively.
- Model-predicted ambient criteria air pollutant concentrations attributable to the Facility indicate that the Facility will not cause or contribute to an exceedance of any ambient air quality standards.
- Model-predicted ambient concentration increases attributable to the Facility will not exceed any regulatory TAP screening thresholds.

2.0 FACILITY DESCRIPTION

2.1 Facility Location

The Facility is located at 2107 Road O NE near Moses Lake, which is in Grant County. The Facility location is shown on Figure 1 while the locations of Facility structures and emission points are shown on Figure 2.

2.2 Description of Equipment and Operational Changes

As currently permitted, the Facility consists of two potato process lines housed in a production building. Exhaust from both production line fryers is directed to a single wet electrostatic precipitator (WESP) to achieve a high degree of emissions control, and which Ecology has determined constitutes BACT for particulate matter (PM) emissions from the fryers. Production dryers vent directly to the atmosphere. Steam for process needs and building heat is provided by a boiler with a rated heat input of 120 million British thermal units per hour (MMBtu/hr) on a higher heating value (HHV) basis. The boiler is capable of firing natural gas alone or in combination with biogas generated by an anaerobic digester. Two diesel-fired water pump engines support the building fire protection system and one diesel-fired emergency generator supplies backup power in the case of a power outage.

This NOC application requests the following revisions to the Permit to allow the Facility to be constructed and operated in a manner that will meet Simplot's business objectives:

- The gas-fired boiler will have a rated heat input of 103 MMBtu/hr rather than the currently permitted heat input of 120 MMBtu/hr.
- The maximum throughput of both potato-processing lines will be 10 percent greater (i.e., 726 tons per day [tpd] instead of 660 tpd for the Main Line and 165 tpd instead of 150 tpd for the Preform Line) than the throughput indicated in the original NOC application.
- The Main Line dryer will be heated by steam rather than by combusting natural gas.
- The total aggregate heat input capacity of the air-handling units (AHUs) at the processing plant will be increased from 12 MMBtu/hr to 52 MMBtu/hr.
- The flare and new anaerobic digester will not be constructed. During normal operations, biogas from the existing Simplot Moses Lake digester will be combusted by the boiler. If the boiler is not operating, biogas will be combusted by the existing flare at the Simplot Moses Lake facility located northwest of the Facility.
- There will be only one firewater pump at the Facility, not two. The horsepower (hp) rating of the engine decreased from 510-hp to 350-hp.

2.3 Post-Revision Process Description

As currently permitted, and following the requested changes to Permit, the Facility will produce par-fried French fries and par-fried preformed potato products using the same general production process Simplot uses at other facilities. Trucks will transport raw potatoes to the Facility, where the

potatoes will be unloaded inside an enclosed receiving area within the new processing building. The potatoes will be mechanically sorted by size and, during harvest season, randomly inspected by the Washington State Department of Agriculture.

After sorting and inspection, the potatoes will be transported to one of two production lines. Line 1 (the "Main Line") will produce fried and battered or non-battered product and Line 2 (the "Preform Line") will produce fried and preformed potato products. Steam peelers will remove the potato peels for most product cuts prior to being sliced into various shapes and lengths. After the potatoes are cut and sorted into different lengths, they will be dipped in hot water blancher tanks to remove excess sugars.

The sliced and blanched potatoes in each production line will be conveyed to dryers to remove moisture. Once the moisture is removed, the potatoes in Line 1 will be conveyed to the Line 1 fryer and the potatoes in Line 2 will be formed into preformed potato products before being conveyed to the Line 2 fryer. Following the frying process, the final potato products will be frozen and packaged for storage and shipping. Table 1 below presents the nominal capacity of each production line.

Table 1: Project Rainier Processing Line Capacity

Line No.	Product Type	Finished Product Throughput	
		(tpd)	(tpy)
Line 1	Batter/Fry	726	264,990
Line 2	Preform	165	60,225

Abbreviations and Acronyms:
tpd = tons per day
tpy = tons per year

The dryers and fryers associated with each production line will be heated using steam from the boiler. Exhaust from the dryers contains a small amount of PM and will be vented to the atmosphere. Exhaust from the fryers will be routed to the WESP to minimize PM and condensable organics emitted to the atmosphere.

In addition to heating both dryers and fryers, the boiler will also provide steam to the peelers and blanchers. The boiler will be capable of firing either natural gas or a mixture of natural gas and biogas from the anaerobic digester. Simplot plans to use heat exchangers to recover waste heat from potato-processing equipment that will be used to heat the Facility.

Simplot proposes to use an anaerobic digester to biologically treat process wastewater prior to application to the Facility's agricultural lands. Simplot plans to combust the digester biogas in the boiler. Simplot will install sulfur removal technology (i.e., an iron sponge) to remove up to 98 percent of the hydrogen sulfide in the biogas prior to combustion.

There will be one diesel emergency engine and one firewater pump at the Facility, which will be tested periodically throughout the year.

2.4 Post-Revision Air Pollutant Emissions

To determine the applicability of regulations, and to predict potential air quality impacts attributable to the Facility, the types and quantities of air pollutant emissions were identified. Pollutant emissions were determined by the physical and operational characteristics of the proposed equipment. This section describes how Facility-wide criteria pollutant and TAP emission calculations were updated to reflect the requested Permit revisions. The following updates were made:

- Boiler emission factors for carbon monoxide (CO), sulfur dioxide (SO_2), and oxides of nitrogen (NO_X) were updated to reflect manufacturer guarantees
- Because the Main Line dryer will be heated by steam rather than natural gas, it will generate only PM and volatile organic compound (VOC) emissions
- The flowrate of biogas from the anaerobic digester to the boiler was increased from 547 cubic feet per minute (cfm) to 750 cfm.

Facility emission units will emit PM with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), PM with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), VOCs, NO_X, CO, sulfur dioxide (SO_2), hazardous air pollutants (HAPs), and TAPs. Proposed roadways will emit only PM_{10} and $PM_{2.5}$ in the form of fugitive dust. Potential emissions were calculated by combining proposed BACT limits or representative emission factors, as appropriate, with maximum activity or operating rates. Emission factors for greenhouse gases (GHGs) (carbon dioxide [CO_2], methane [CH_4], and nitrous oxide [N_2O]) generated by fuel combustion were taken from Table C-1 to Subpart C of the US Environmental Protection Agency's (EPA's) mandatory GHG reporting rule, which is codified in 40 Code of Federal Regulations (CFR) Part 98. Calculated GHG emissions are expressed as carbon dioxide equivalents (CO_2e) based on the 100-year global warming potentials (GWPs) from Table A-1 to Subpart A of 40 CFR Part 98.1 Additional details regarding the emission calculation methodologies are provided in the sections below, while detailed emission calculations are provided in Appendix C.

Table 2 below presents the potential criteria pollutant and HAP emissions associated with the Facility.

[1] As of this writing, the 100-year GWPs in Table A-1 to 40 CFR Part 98 are: 1 for CO_2; 25 for CH_4; and 298 for N_2O.

Table 2: Facility Criteria Pollutant and Hazardous Air Pollutant Annual Emissions

Pollutant	Emission Rate (tpy)								
	Boiler	Main Line Dryer	Preform Line Dryer	WESP	Firewater Pump	Emergency Generator	AHUs	Roadways	Project Total
$PM_{2.5}$	3.4	4.0	2.2	6.1	0.0042	0.0023	1.7	0.107	17
PM_{10}	3.4	4.0	2.2	6.1	0.0042	0.0023	1.7	0.43	18
NO_X	16	--	--	--	0.10	0.074	23	--	39
CO	18	--	--	--	0.03	0.023	19	--	37
SO_2	4.5	--	--	--	1.7E-04	1.3E-04	0.14	--	4.6
VOC	2.4	2.3	4.4	88	0.010	0.0075	1.2	--	98
Lead	2.2E-04	--	--	--	--	--	1.1E-04	--	3.3E-04
CO_2e	52,634	--	--	--	18	14	26,877	--	79,544
Total HAPs	0.90	--	--	--	0.0028	0.0020	0.44	--	1.3

Abbreviations and Acronyms:

AHU = air-handling unit
CO = carbon monoxide
CO_2e = carbon dioxide equivalent
HAP = hazardous air pollutant
NO_X = oxides of nitrogen
$PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns
SO_2 = sulfur dioxide
tpy = tons per year
VOCs = volatile organic compounds
WESP = wet electrostatic precipitator

2.4.1 Boiler and Anaerobic Digester

The boiler will have a maximum heat input rate of 103 MMBtu/hr (HHV) and will be equipped with low-NO_X burners (LNBs). The boiler will be capable of burning either natural gas alone or natural gas in combination with biogas from the anaerobic digester. Biogas from the anaerobic digester will have a maximum flow rate of 750 cfm.

Boiler emissions are based on manufacturer performance guarantees, the sulfur content of the biogas, other criteria pollutant emission factors from AP-42 Section 1.4, Natural Gas Combustion (EPA 1998), and TAP emission factors recommended by Ecology that were developed by California's Ventura County Air Pollution Control District (VCAPCD 2001) and AP-42 Section 1.4. The AP-42 and VCAPCD emission factors, which have units of pounds of pollutant per million standard cubic feet (lb/MMscf) of natural gas, were divided by the referenced natural gas heat content (1,020 Btu/scf) to normalize the emission factors by heat input. Short-term potential emissions from the boiler are based on the maximum heat input rate and annual emissions are based on continuous operation (8,760 hours per year). Emission calculations for the new boiler are provided in Table C-2 of Appendix C.

The anerobic digester is anticipated to generate up to 750 cubic feet of biogas per minute (cfm) and 394 million cubic feet of biogas per year. During normal operations, all of the biogas produced by the digester will be burned in the boiler. If the boiler is not operating, Simplot plans to use the existing flare located at the Simplot Moses Lake facility to combust the biogas. Approximately 60 percent of the digester's biogas will be combustible methane, a small fraction (approximately 3,800 parts per million by volume [ppmv]) will be hydrogen sulfide, and the remainder will be CO_2, an incombustible gas.

Because the combustible portion of the biogas is similar to natural gas, Landau used emission factors for natural gas combustion (AP-42 Section 1.4 and VCAPCD) to represent biogas combustion for all pollutants except CO, NO_X, and SO_2. The NO_X and CO emission factors for natural gas and biogas are based on manufacturer performance guarantees. The SO_2 emission factor for combusting biogas in the boiler is based on manufacturer performance guarantees and the natural gas emission factor is based off of AP-42 Section 1.4. To calculate the hydrogen sulfide (H_2S) emission factor, it was conservatively assumed that 98 percent of the H_2S is oxidized to SO_2. The calculation uses a H_2S concentration of 3,800 ppmv in the biogas and assumes 98 percent removal with an iron sponge system.

2.4.2 Dryers and Fryers

The Facility includes two potato-processing lines. Both the Main Line (Line 1) and the Preform Line (Line 2) are heated by steam from the boiler. Exhaust from the fryers will be routed to a WESP to control PM emissions.

Dryer process emissions are based on recent source test data from other Simplot potato-processing plants. Short-term potential emissions from the dryers are based on the maximum hourly production rate, while annual emissions are based on continuous operation (8,760 hours per year).

Each of the processing lines (Main Line 1 and Preform Line 2) includes a fryer. Exhaust from the fryers will be routed to a WESP to control PM and condensable organic emissions. The fryers, which will be heated by steam, generate PM and VOC emissions as a result of the frying process. Process emissions are based on proposed BACT emission limits and VOC emission factors from Simplot engineering tests. Short-term potential emissions from the fryers are based on the two-production-line combined fryer exhaust rate (8,000 dry standard cubic feet [dscf] per minute), and annual emissions are based on continuous operation (8,760 hours per year).

Emission calculations for the fryers are provided in Table C-3 and for the dryers in Tables C-4 and C-5 of Appendix C.

2.4.3 Firewater Pump and Emergency Generator Engines

The Facility proposes to install one diesel-powered fire pump (350-hp) and one emergency generator (237-hp). Combustion emissions are based on applicable manufacturer specifications, sulfur limits for diesel fuel, AP-42 Section 3.3 (Gasoline and Diesel Industrial Engines) emission factors (EPA 1996), TAP emission factors from AP-42 Section 3.3, VCAPCD, and the California Air Toxics Emission Factor (CATEF) database (California Air Resources Board [CARB]), and GHG emission factors from EPA's mandatory GHG reporting rule. Short-term potential emissions of toxic and hazardous air pollutants and GHGs from the

engines are provided on a heat input basis (lb/MMBtu). Thus, the AP-42 general brake-specific fuel consumption of 7,000 Btu per hp-hour was used to calculate the maximum heat input rate of the engines. Annual emissions are based on 100 hours of operation per year for testing and readiness checks. Simplot plans to operate the engines for testing no more than 1 hour per day.

Emission calculations from the fire pump and emergency generator engine are provided in Tables C-6 and C-7of Appendix C.

2.4.4 Air-Handling Units

The Facility proposes to install approximately 46 AHUs throughout the main production building and three AHUs in the office for the high bay freezer. Criteria pollutant emissions are based on emission factors from AP-42 Section 1.4 (Natural Gas Combustion), GHG emission factors from EPA's mandatory GHG reporting rule, and TAP emission factors from VCAPCD and AP-42 Section 1.4. The AP-42 and VCAPCD emission factors, which have units of lb/MMscf of natural gas, were divided by the referenced natural gas heat content (1,020 Btu/scf) to normalize the emission factors by heat input. Short-term potential emissions from the AHUs are based on the maximum heat input rate and maximum hourly production rate, while annual emissions are based on continuous operation (8,760 hours per year). On an actual basis, the AHUs will only operate during cold months when the Facility boiler is not operating.

Emission calculations from the production building and high bay freezer office AHUs are provided in Tables C-9 and C-10 of Appendix C.

2.4.5 Fugitive Dust

Expected traffic at the Facility includes potato delivery trucks, refrigerated trucks, and personal vehicles. All roadways at the Facility will be paved and maintained (i.e., swept and watered) as necessary. Fugitive dust from paved roadways was calculated using site-specific truck traffic information (i.e., vehicle weight and vehicle miles traveled), assumed road surface silt content, and emission factors from the EPA's AP-42, Volume I, Chapters 13.2.1 (Paved Roads; EPA 2011). An overall control efficiency of 75 percent was applied to account for the combined dust minimization techniques.

Emission calculations for the roadways are provided in Table C-8 of Appendix C.

3.0 REGULATORY SETTING

The Facility is subject to federal and state air quality regulations. The following subsections discuss the applicable regulations and why certain regulatory programs are not applicable. It should be noted that the Facility will be located in an area that is in attainment of all ambient air quality standards.

3.1 Federal Regulations

3.1.1 Prevention of Significant Deterioration

Because Grant County is in attainment or unclassifiable for all criteria pollutant ambient standards, Washington's State Implementation Plan-approved PSD permit program would apply to the Facility if it were a new major source or a major modification of an existing source of regulated air pollutants. A PSD permit is required if potential Facility-wide emissions exceed 250 tpy. The PSD permitting threshold for GHG emissions is 100,000 tpy of CO_2e and the threshold for any other regulated pollutant emissions is greater than 250 tpy. PSD review for GHG is only required if the project is otherwise subject to PSD review for a different regulated pollutant. The Facility will not emit any pollutants at or above these thresholds. Consequently, the Facility does not require a PSD permit.

3.1.2 Air Operating Permit Program

Title V of the federal Clean Air Act requires facilities that exceed one or more of the operating permit major source thresholds to obtain a Title V Air Operating Permit. The operating permit major source thresholds are annual potential emissions greater than 100 tons of a regulated criteria pollutant, 10 tons of a single HAP, and 25 tons of all HAPs combined. The threshold for GHG emissions, which is 100,000 tpy of CO_2e, is applicable only if another regulated pollutant exceeds one or more of the other Title V applicability thresholds.

The Facility's annual potential emissions are expected to be less than all Title V major source thresholds. However, Ecology has indicated that the Facility and the existing Simplot Moses Lake facility are considered a single combined source due to the proximity of the Facility to the existing wastewater treatment plant, similar industrial source codes, and common ownership. The combined potential emissions from the two facilities exceeds Title V applicability thresholds, and Simplot will submit a Title V permit application within 12 months from the time that the combined source becomes subject to Title V (i.e., upon commissioning of the Facility).[2]

3.1.3 New Source Performance Standards

New Source Performance Standards (NSPS) are nationally uniform standards that apply to specific categories of stationary sources of regulated air pollutants that are constructed, modified, or reconstructed after the standard was proposed. NSPS regulations are promulgated in 40 CFR Part 60,

[2] Washington Administrative Code (WAC) 173-401-500(3)(b)

and usually represent a minimum level of control that is required of a new source. The following portions of the NSPS regulations potentially apply to the equipment at the Facility, and the applicability of each is discussed in the subsections below:

- Subpart A: General Provisions (40 CFR 60.1-60.19)
- Subpart Db: Standards of Performance for Industrial-Commercial-Institutional Steam-Generating Units (40 CFR 60.40b-60.49b)
- Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60.4200-60.4219).

3.1.3.1 Subpart A: General Provisions

Any stationary source that is subject to any NSPS regulation is also subject to the general notification, recordkeeping, and monitoring requirements of the NSPS General Provisions, unless the applicable CFR Part 60 Subpart regulation specifically exempts the source from the provisions of Subpart A. As detailed below, some of the equipment at the Facility will be subject to NSPS rules; therefore, the General Provisions will apply to those affected sources as dictated by the applicable NSPS rules.

3.1.3.2 Subpart Db: Standards of Performance for Industrial-Commercial-Institutional Steam-Generating Units

Subpart Db of the NSPS applies to steam-generating units that are constructed, modified, or reconstructed after June 19, 1984, and have a maximum design heat input capacity of greater than 100 MMBtu/hr. Subpart Db will apply to the boiler because it has a maximum heat input rate of 103 MMBtu/hr and was constructed after June 19, 1984.

The boiler will burn natural gas and treated biogas with potential SO_2 emissions expected to be less than 0.32 lb/MMBtu. Therefore, the boiler will be exempt from an SO_2 emission limit but Simplot will be required to maintain fuel records certifying compliance with the fuel sulfur content requirements.

The new boiler will be subject to a NO_X emission limit of 0.10 lb/MMBtu or 0.20 lb/MMBtu (30-day rolling average). Simplot will be required to conduct an initial 30-day source test and continuous compliance will be determined by either a continuous emission monitoring system or by tracking operating conditions and predicting NO_X emissions according to an approved plan.

Monitoring and recordkeeping for natural gas and biogas usage will be required.

3.1.3.3 Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

This subpart is applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines. Specifically, this regulation applies to owners and operators of stationary CI firewater pump (FWP) engines manufactured on or after July 1, 2006. The emergency generator engine and FWP engine will be subject to Subpart IIII and the emission standards in 40 CFR 60.4202(d). In addition to the emission standards, the CI engines will be required to meet the following Subpart IIII requirements:

- As of October 1, 2010, the permittee must use fuel that meets the requirements of 40 CFR 80.1090.305 for non-road diesel fuel as follows: a maximum sulfur content of 15 parts per million (ppm) by weight, and either a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume (40 CFR 60.4207[b]).
- If the engines do not meet the standards that apply to comparable nonemergency engines, they must be equipped with a non-resettable hour meter prior to startup and records of the operation of the engine in emergency and nonemergency service must be kept (40 CFR 60.4209[a] and 40 CFR 60.4214[b]).
- The permittee must operate and maintain CI engines according to the manufacturer's emission-related written instructions and change only those settings that are permitted by the manufacturer. The permittee must also meet the requirements of 40 CFR Part 1068, General Compliance Provisions for Highway, Stationary, and Nonroad Programs (40 CFR 60.4211[a]).
- The permittee must comply with NSPS Subpart IIII by purchasing engines that are certified to the emission standards in 40 CFR 60.4205(b), which directs the permittee to 40 CFR 60.4202(a). The engines must be installed and configured according to the manufacturer's emission-related specifications (40 CFR 60.4211[c]).
- The following operational requirements apply to emergency engines, as that term is defined in Subpart IIII:
  - There is no time limit on the use of emergency stationary reciprocating internal combustion engines (RICEs) in emergency situations.
  - Maintenance checks and readiness testing, if recommended by federal, state, or local government, the manufacturer, or an insurance company, are limited to 100 hours per year. The permittee may petition for approval of additional hours unless there are records indicating that federal, state, or local standards require maintenance and testing beyond 100 hours per year.
  - The permittee may operate the emergency stationary RICE up to 50 hours per year in nonemergency situations, but those hours are counted toward the 100 hours provided for maintenance and testing and cannot be used for peak shaving or to supply power to the electrical grid (40 CFR 60.4211[f]).

Simplot will purchase, operate, and maintain the emergency generator engine and FWP engine in compliance with NSPS Subpart IIII requirements.

3.1.4 National Emission Standards for Hazardous Air Pollutants

The National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations promulgated in 40 CFR Parts 61 and 63 establish emission standards for HAP emissions from certain source categories. These rules represent the federal regulatory mechanism used to regulate HAPs under the Clean Air Act after it was amended on November 15, 1990. A key component of regulatory applicability under this part is the distinction between a "major source" and an "area source" of HAPs.

A major source is a stationary source that emits or has the potential to emit considering controls, in the aggregate, 10 tpy or more of any HAP or 25 tpy or more of any combination of HAPs. An area source is

any stationary source of HAPs that is not a major source, as defined above. As shown in Table 2, the Facility will be considered an area source under NESHAP regulations.

The following area source NESHAP regulations potentially apply to the Facility; applicability is discussed in the subsections that follow:

- 40 CFR Part 63, Subpart A: General Provisions (40 CFR Parts 63.1-63.16)
- 40 CFR Part 63, Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR Parts 63.6580-63.6675)
- 40 CFR Part 63 Subpart JJJJJJ: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers – Area Sources (40 CFR Parts 63.11193-63.11237).

3.1.4.1 40 CFR Part 63, Subpart A: General Provisions

The provisions of Subpart A apply to each facility that is subject to the requirements of any Part 63 NESHAP rule. Subpart A has general requirements for notifications, monitoring, performance testing, reporting, recordkeeping, and operation and maintenance. These general requirements will apply to the Facility as referenced in the NESHAP subparts discussed below.

3.1.4.2 40 CFR Part 63, Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

This subpart has emission standards for stationary RICEs located at major and area sources of HAP emissions. As discussed earlier in this report, the proposed emergency generator engine and FWP engine will be subject to the applicable emission standards and work practice requirements in NSPS Subpart IIII.

A stationary RICE subject to NSPS Subpart IIII and located at an area source is considered an "affected source" under NESHAP Subpart ZZZZ; however, no additional requirements beyond those imposed by NSPS Subpart IIII will apply to the proposed stationary RICE (40 CFR 63.6590[c][1]).

3.1.4.3 Subpart JJJJJJ: National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

This subpart is not applicable to gas-fired boilers, which are defined as any boiler that burns gaseous fuels not combined with any solid fuels or burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Gas fuels include, but are not limited to, natural gas, process gas, landfill gas, coal-derived gas, refinery gas, hydrogen, and biogas.

The proposed boiler at the Facility is categorized as a gas-fired boiler because it will burn natural gas and biogas. Therefore, the boiler is not subject to any requirements under Subpart JJJJJJ.

3.2 State and Local Emission Regulations

3.2.1 General Air Pollution Control Regulations

Regulations that address general air pollution sources in Washington are promulgated in Chapter 173-400 of the WAC. Note that all of these general conditions will apply to the Facility, which is not exempt from any general requirements.

General standards for maximum emissions from air pollution sources in Washington are outlined in WAC 173-400-040. These regulations limit visible emissions to 20 percent opacity except for 3 minutes per hour; require control of nuisance particulate fallout, fugitive dust, and odors; and limit SO_2 emissions to no more than 1,000 ppm (hourly average, 7 percent oxygen, dry basis). The Facility will comply with all general Washington emission standards.

3.2.2 Notice of Construction Permits

Washington requires new or modified industrial sources to obtain an NOC air quality permit. The NOC permit application must provide a description of the facility, an inventory of pollutant emissions, and proposed control systems for the applicable pollutants. The reviewing agency considers whether BACT has been employed and evaluates ambient concentrations resulting from these emissions to ensure compliance with ambient air quality standards. As stated in WAC 173-400-113, an NOC permit cannot be granted unless the agency determines that the project: 1) will meet applicable state and federal emission limits; 2) will employ BACT; 3) will not cause or contribute to violations of ambient air quality standards; and 4) will meet all applicable requirements of the TAP program in Chapter 173-460 WAC. This NOC application supporting information report provides the information to enable Ecology to confirm those determinations.

Washington regulations require that new sources or modifications of existing sources employ BACT for all air pollutants not previously emitted, or whose emissions would increase as a result of the new source or modification. The BACT analysis evaluates the energy as well as environmental, economic, and other costs associated with each technically feasible emission reduction alternative and weighs those costs against the reduced emissions each alternative would provide. Regulations also require a demonstration of compliance with the applicable air quality standards, which is typically accomplished through an air dispersion modeling analysis. The modeling analytical methodology and results are provided in Section 4 of this report.

3.2.3 Best Available Control Technology

As discussed in the previous section, new stationary sources are required to employ BACT and tBACT for all emission sources at the Facility. Simplot is not requesting changes to BACT and tBACT determinations made for already permitted emission units. Washington guidance for BACT determinations indicates using either presumptive BACT or a “top-down” approach (Ecology 2021). A preliminary discussion with Ecology staff and equipment vendors and a search of the reasonably available control technology (RACT)/BACT/lowest achievable emission rate (LAER) Clearinghouse (RBLC) and recently issued permits in Washington were used as the bases for the BACT and tBACT analyses and proposals below.

3.2.3.1 Natural Gas-Fired Boiler

The boiler for the Facility will be required to cover a range of operating conditions depending on Facility steam demand from peelers, blanchers, and fryers. The steam demand requirements will vary depending on the number of process lines operating and the process line throughput rates. Simplot plans to burn natural gas and biogas (from the anaerobic digester) in the boiler. Burner vendors supplied the following operation and emission information for LNB and ultra-low-NO_X burner (ULNB) options:

- LNBs have a burner turndown ratio of 10:1 (i.e., loads ranging from 100 percent of the boiler's maximum capacity rating, or MCR, to 10 percent of MCR) and are capable of achieving 30 ppm at 3 percent O_2 for NO_X and 50 ppm at 3 percent O_2 for CO across that operating range.
- ULNBs have a burner turndown ratio of 4:1 or 5:1 (i.e., loads ranging from 100 percent of MCR to 25 or 20 percent of MCR) and are capable of achieving 9 ppm at 3 percent O_2 for NO_X and 50 ppm CO (3 percent O_2) across that operating range.

The burner turndown ratio is key to operating the boiler while maintaining good combustion. The turndown ratio is the ratio of maximum output to minimum output, where the burner/flame is controllable and the boiler operates efficiently. Attempting to operate a boiler at loads less than the minimum turndown results in unstable operation and boiler shutdown. ULNBs have a smaller turndown ratio compared to LNBs because the more complex burner design needed to deliver higher volumes of recirculated flue gas and excess combustion air to the burner. Overall, ULNBs offer lower NO_X emissions but the range of operation is more limited than that of LNBs.

The proposed boiler at the Facility will be required to operate under a wide range of loads. Steam requirements will vary from the low range (minimum required equipment and Facility cleaning activities) to the high range (both production lines operating at or near maximum capacity). The limited turndown ratio of the ULNB will not meet the operating range requirements for the Facility. Therefore, the ULNB burner option is not technically feasible. Simplot proposes presumptive BACT for SO_2, PM, VOC, and TAP emissions from the boiler is the use of pipeline natural gas, treated biogas (see Section 3.2.3.2 below), and good combustion practices.

In the previous NOC application, Simplot proposed presumptive BACT for NO_X and CO emission from the boiler was 30 ppm at 3 percent O_2 and 50 ppm at 3 percent O_2, respectively. For this revision application, NO_X and CO emission factors for biogas and natural gas combustion by the boiler are based on manufacturer guarantees, which are summarized in Table 3 below. Using the natural gas F-factor of 8,710 dscf/MMBTU, the natural gas emission factors can be converted to ppm for comparison with the proposed BACT listed above. As shown in Table 3 below, the manufacturer natural gas and biogas emission factor for NO_X is equivalent to the proposed BACT limit of 30 ppm at 3 percent O_2. The CO natural gas and biogas emission factor is slightly higher than the proposed BACT limit of 50 ppm at 3 percent O_2; however, this may be due to a rounding error (i.e., 0.037 lb/MMBtu CO is equivalent to 50 ppm at 3 percent O_2, but the manufacturer provided emission rate of 0.04 lb/MMBtu CO is equivalent to 54 ppm at 3 percent O_2). Simplot proposed presumptive BACT for NO_X and CO emissions from the boiler is the emission rates listed in Table 3.

Table 3: Boiler Emission Factors

Pollutant	Fuel Type	Emission Factor	
		lb/MMBtu [a]	ppmvd @ 3% O_2 [b]
NO_X	Natural Gas/Biogas	0.036	30
CO	Natural Gas/Biogas	0.04	54

Notes:
a. Based off manufacturer guarantees.
b. Calculated using the natural gas F-factor of 8,710 dscf/MMBtu.

Abbreviations and Acronyms:
CO = carbon monoxide
lb/MMBtu = pound per million British thermal units
NO_X = oxides of nitrogen CO = carbon monoxide
O_2 = oxygen
ppmvd = parts per million by volume, dry basis

3.2.3.2 Anaerobic Digester and Biogas

Simplot plans to use biogas as fuel for the boiler. When the boiler is not operating, the biogas will be combusted by the existing flare at the Simplot Moses Lake facility. To reduce the concentration of sulfur in the biogas before combustion in the boiler, Simplot plans to install an iron sponge system. This will reduce sulfur content in biogas by approximately 98 percent, and Simplot proposes this as presumptive BACT for SO_2 emissions from biogas combustion in the boiler.

3.2.3.3 Main Line and Preform Line Fryers

The potato fryers operated at the Facility will both be heated by steam and will therefore emit only PM and VOC emissions generated by the frying process. Process gases from the fryers have relatively low VOC concentrations (330 ppmvd) and high moisture content (>50 percent by volume). The fryer exhaust gases are expected to also contain oil droplets that can foul or collect on control equipment media/filters. Simplot plans to install a WESP to reduce both PM and condensable organic compound emissions from the fryers. A WESP is the most effective control technology available for removal of PM from potato fryers. Based on discussions with Ecology concerning BACT for potato fryers, Simplot proposes that presumptive BACT for PM emissions from the fryers is 0.018 grains per dscf.

Although a regenerative thermal oxidizer (RTO) is a means of controlling VOC emissions, an RTO is not as reliable as a WESP for controlling emissions from fryers, which makes the RTO less efficient compared to a WESP. The unreliability of an RTO is due to safety concerns with oil droplets collecting in the RTO and catching fire. There have been several instances where RTOs controlling potato fryers have caught fire, damaging control equipment and other facility property.

Carbon adsorption is another method to remove or recover VOCs from an exhaust stream. Activated carbon is less effective in situations where the gas stream has high moisture content and other impurities (i.e., fryer oil droplets). To Landau's knowledge, there are no potato fryer operations in the US that have installed/operated an activated carbon system to remove/recover VOCs.

The WESP will also remove VOCs in the form of condensable organic particulates but it is difficult to estimate the level of control; therefore, the potential VOC emissions from the WESP are based on uncontrolled emissions.

3.2.3.4 Diesel Fire Pump and Emergency Generator

Simplot plans to install a diesel fire pump (350-hp) to provide water to fight fires during emergency scenarios. One emergency generator (237-hp) will be installed to provide emergency power to the high bay freezer building. The diesel engines will comply with EPA certifications under NSPS Subpart IIII, which Simplot proposes as presumptive BACT for all pollutants emitted by the engines.

3.2.3.5 Natural Gas-Fired Air-Handling Units

Simplot plans to install approximately 46 natural gas-fired AHUs in the main processing building and approximately three natural gas-fired AHUs in the offices of the high bay freezer. The natural gas burner rating for the AHUs will range from 0.08 MMBtu/hr to 4.6 MMBtu/hr. The AHUs in the main process building will generally only be operated during colder months when the plant is not operating, so as to prevent freezing inside the building. Simplot proposes presumptive BACT for the AHUs as use of pipeline natural gas and good combustion practices.

3.2.3.6 Toxic Air Pollutants

TAPs are, in general, either volatiles (VOCs) or particles (PM). The BACT proposals for VOC and PM emissions from the emission units outlined in the sections above are also proposed as tBACT for VOC and PM TAPs, respectively. tBACT for TAPs that contain chlorine (e.g., hydrogen chloride) and sulfur (e.g., hydrogen sulfide) is proposed to be the same as that proposed for SO_2. For nitrogen-containing compounds (e.g., ammonia and NO_2), tBACT is proposed to be the same as that proposed for NO_X.

3.2.4 Toxic Air Pollutants

Ecology regulations require a demonstration that TAP emissions attributable to the Facility will be sufficiently low to protect human health and safety from potential carcinogenic and other toxic effects and that new or modified emission units will employ tBACT for emissions control for the TAPs with emission increases that trigger the need to submit an NOC application. Table 4 below provides TAP emissions attributable to the Facility, including the proposed Permit revisions, and compares them with the applicable small-quantity emission rates (SQERs) prescribed by Chapter 173-460 WAC. The SQER for each TAP has a short-term (pounds per hour [lb/hr] or lb/24-hr) or long-term (pounds per year [lb/yr]) averaging period basis. If TAP emissions from a project will be greater than an applicable SQER, the ambient concentration increase of that TAP must be assessed using a dispersion modeling analysis.

Table 4 also indicates that Facility emissions of six TAPs will exceed the applicable SQER: 7,12-Dimethylbenz(a)anthracene (DMBA), diesel engine exhaust particulate matter (DEEP), formaldehyde, H_2S, nitrogen dioxide (NO_2), and vanadium. A description of the air quality dispersion analysis conducted to obtain ambient concentration increases of these TAPs for comparison with the acceptable source impact levels (ASILs) is provided in Section 4.

Table 4: Facility Toxic Air Pollutant Emissions

Toxic Air Pollutant [a]	CAS #	Avg. Period	Facility-Wide Emission Rate (lb/avg period)	*de Minimis* (lb/avg period)	SQER (lb/avg period)	Greater Than *de Minimis*?	Greater Than SQER?
1,3-Butadiene	106-99-0	year	6.18E-01	0.27	5.4	**Yes**	No
3-Methylchloranthrene	56-49-5	year	2.40E-03	0.00078	0.016	**Yes**	No
7,12-Dimethylbenz(a)anthracene	**57-97-6**	**year**	**2.13E-02**	**0.000069**	**0.0014**	**Yes**	**Yes**
Acetaldehyde	75-07-0	year	4.43E+00	3	60	**Yes**	No
Acrolein	107-02-8	24-hr	5.84E-03	0.0013	0.026	**Yes**	No
Ammonia	7664-41-7	24-hr	8.16E-02	1.9	37	No	No
Benz(a)anthracene	56-55-3	year	5.48E-03	0.045	0.89	No	No
Benzene	71-43-2	year	5.01E+00	1	21	**Yes**	No
Benzo(a)pyrene	50-32-8	year	4.11E-03	0.0082	0.16	No	No
Benzo(b)fluoranthene	205-99-2	year	7.38E-03	0.045	0.89	No	No
Benzo(k)fluoranthene	207-08-9	year	7.30E-03	0.045	0.89	No	No
Carbon monoxide	630-08-0	1-hr	9.43E+00	1.1	43	**Yes**	No
Chlorobenzene	108-90-7	24-hr	3.37E-06	3.7	74	No	No
Chromium(VI)	18540-29-9	year	2.84E-04	0.000033	0.00065	**Yes**	No
Chrysene	218-01-9	year	5.17E-03	0.45	8.9	No	No
Chrysene	218-01-9	year	5.17E-03	0.45	8.9	No	No
Cobalt	7440-48-4	24-hr	3.07E-04	0.00037	0.0074	No	No
Copper	7440-50-8	1-hr	2.46E-04	0.0093	0.19	No	No
DEEP	**—**	**year**	**1.31E+01**	**0.027**	**0.54**	**Yes**	**Yes**
Dibenzo(a,h)anthracene	53-70-3	year	4.24E-03	0.0041	0.082	**Yes**	No
Dichlorobenzene	106-46-7	year	1.60E+00	0.74	15	**Yes**	No
Ethylbenzene	100-41-4	year	4.92E+00	3.2	65	**Yes**	No
Formaldehyde	**50-00-0**	**year**	**1.05E+02**	**1.4**	**27**	**Yes**	**Yes**
Hexane	110-54-3	24-hr	6.57E+00	2.6	52	**Yes**	No
Hydrogen chloride		24-hr	3.14E-03	0.033	0.67	No	No
Hydrogen sulfide	**7783-06-4**	**24-hr**	**3.29E-01**	**0.0074**	**0.15**	**Yes**	**Yes**
Indeno(1,2,3-cd)pyrene	193-39-5	year	5.01E-03	0.045	0.89	No	No
Lead	7439-92-1	year	6.66E-01	10	14	No	No
Manganese	7439-96-5	24-hr	1.44E-03	0.0011	0.022	**Yes**	No

Toxic Air Pollutant [a]	CAS #	Avg. Period	Facility-Wide Emission Rate (lb/avg period)	*de Minimis* (lb/avg period)	SQER (lb/avg period)	Greater Than *de Minimis*?	Greater Than SQER?
Mercury	7439-97-6	24-hr	9.83E-04	0.00011	0.0022	**Yes**	No
m-Xylene	108-38-3	24-hr	3.63E-04	0.82	16	No	No
Naphthalene	91-20-3	year	9.14E-01	0.24	4.8	**Yes**	No
Naphthalene	91-20-3	year	9.14E-01	0.24	4.8	**Yes**	No
Nitrogen dioxide	**10102-44-0**	**1-hr**	**1.24E+01**	**0.46**	**0.87**	**Yes**	**Yes**
o-Xylene	95-47-6	24-hr	3.52E-04	0.82	16	No	No
Propylene	115-07-1	24-hr	7.04E-01	11	220	No	No
Selenium	7782-49-2	24-hr	1.25E-04	0.074	1.5	No	No
Sulfur dioxide	7446-09-5	1-hr	1.05E+00	0.46	1.2	**Yes**	No
Toluene	108-88-3	24-hr	5.35E-02	19	370	No	No
Vanadium	**7440-62-2**	**24-hr**	**8.40E-03**	**0.00037**	**0.0074**	**Yes**	**Yes**
Xylenes	1330-20-7	24-hr	3.92E-02	0.82	16	No	No

Notes:
(a) Toxic air pollutants, averaging period, *de minimis*, and SQER are defined in Chapter 173-460 WAC.

Abbreviations and Acronyms:
CAS = Chemical Abstracts Service
DEEP = diesel engine exhaust particulate matter
lb/avg. period = pounds per averaging period
SQER = small-quantity emission rate

3.2.5 State Environmental Policy Act

Because construction of the proposed equipment requires Simplot to obtain an Order of Approval from Ecology, the requirements of Washington's State Environmental Policy Act (SEPA) must be satisfied. A SEPA checklist was submitted to Grant County, the SEPA lead agency, and a Mitigated Determination of Non-Significance (MDNS) was issued in August 2022 (Appendix D).

4.0 AIR QUALITY IMPACT ANALYSIS

Ecology cannot issue a permit to a proposed new source without a demonstration that the emissions attributable to the Facility will not cause or contribute to a violation of any ambient air quality standard, and that TAP emissions will be sufficiently low to protect human health and safety. Dispersion modeling analyses are typically used to predict contaminant concentrations in ambient air attributable to a proposed project for such demonstrations. This section documents the methodology and results of the near-field air quality impact analysis developed for the Facility following implementation of the revisions described in this document. Except for the changes noted below, the methodology of this analysis is the same as that of the original NOC application:

- The layout of the production building and high bay freezer building have changed, which resulted in changes to the location of emissions units and length of onsite roads, which impacts fugitive dust emissions.
- Boiler stack parameters have been updated to reflect manufacturer specifications. The stack diameter has decreased by 1 inch (in), from 43 to 42 in. The exit temperature has increased from 140 degrees Fahrenheit (°F) to 291 °F.
- Firewater pump stack parameters have been updated to reflect manufacturer specifications. The stack diameter decreased from 8 in to 6 in, the exit velocity decreased from 10,055 feet per minute (ft/min) to 9,509 ft/min, and the exhaust temperature decreased from 928 °F to 842 °F.

4.1 Model Selection

Landau reviewed regulatory modeling techniques to select an appropriate air quality model to simulate dispersion of air pollutants emitted by the Facility for a near-field air quality impact analysis. The selection of regulatory modeling tools was influenced by situations where exhaust plumes have the potential to interact with onsite structures (i.e., “building downwash”) or to impact complex terrain. There are several onsite structures with the potential to interact with exhaust plumes, and there is complex terrain in the northern portion of the modeling domain. As a result, the dispersion model selected for the analysis was required to consider both complex terrain and building downwash effects to allow for the possibility of emissions from stacks shorter than dictated by Good Engineering Practice.

The EPA’s “Guideline of Air Quality Models” in 40 CFR 51 Appendix W recommends the use of the American Meteorological Society (AMS)/EPA regulatory model (AERMOD) in this situation. AERMOD was specifically designed to estimate impacts of air pollutants in areas with both simple and complex terrain. AERMOD also includes the plume rise model enhancement (PRIME) downwash algorithms to estimate the effects of surrounding buildings on the dispersion of plumes. Landau used the latest version of AERMOD (Version 23132) for the dispersion modeling analysis.

4.2 Modeling Procedures

Landau applied AERMOD to predict ambient criteria pollutant and TAP concentration increases attributable to the Facility using the regulatory defaults and the inputs described in this section.

4.2.1 Averaging Periods

Ambient pollutant concentrations were calculated using AERMOD for various averaging period bases as required for comparison to applicable regulatory thresholds. For comparison to the criteria pollutant significant impact levels (SILs), National Ambient Air Quality Standards (NAAQS), and ASILs, a variety of pollutant averaging periods were employed as bases for the calculation of ambient concentrations using AERMOD, as required by the applicable ambient concentration criteria for each modeled pollutant. The bases employed include 1-hour, 3-hour, 8-hour, 24-hour, and annual averaging periods.

4.2.2 Elevation Data and Receptor Network

Terrain elevations above sea level for receptor locations were prepared using ⅓ arc-second elevation data from the National Elevation Dataset (NED), which is a product of the US Geological Survey (USGS). The NED is a seamless elevation dataset covering the continental US, Alaska, and Hawaii. The elevation dataset for the modeling analyses was downloaded from the USGS National Map downloader. These data have a horizontal spatial resolution of approximately 10 meters (m).

The Facility boundary is shown on Figure 3. For the dispersion model analyses, grids of receptors were created with between-receptor spacing that increased with distance from the Facility, as listed below and shown on Figure 4:

- 12.5-m spacing from the Facility boundary to 150 m
- 25-m spacing from 150 to 400 m
- 50-m spacing from 400 to 900 m
- 100-m spacing from 900 to 2,000 m
- 300-m spacing from 2,000 to 4,500 m
- 600-m spacing from 4,500 m to 10,000 m.

All receptor grids were centered on the location of the Facility. Receptors were also located at 12.5-m intervals along the ambient air boundary of the Facility. The final receptor locations are shown on Figure 3. The base elevation and hill height scale for each receptor location were determined using the EPA's terrain processor AERMAP (Version 18081), which generates the receptor files that are read by AERMOD. All receptors were located using the Universal Transverse Mercator coordinate system and the spatial reference of the North American Datum of 1983, Zone 11. The public will be restricted from the site using fencing along O Road NE, a guardhouse at Facility entrances, and "No Trespassing" signs along the Facility boundary.

4.2.3 Meteorological Data

Landau conducted a survey of available meteorological data for use in the modeling simulations. A representative 5-year dataset was prepared using available surface and upper-air data for the period 2017 through 2021. Surface meteorology data from Grant County Airport (KMWH) in Moses Lake,

and upper-air data collected at the National Weather Service station near Spokane, Washington were used. A windrose summarizing the KMWH windspeed and wind direction data is provided on Figure 4.

The EPA meteorological program AERMET (Version 22112) was used to combine the surface meteorological observations collected by the KMWH meteorological station with the twice-daily upper-air soundings collected by the station near Spokane, and to calculate the meteorological variables and profiles required by AERMOD. Sub-hourly meteorological data (e.g., 1-minute and 5-minute Automated Surface Observation System data) at KMWH were provided to AERMET and used to reduce the number of calm periods in the meteorological database provided to AERMOD.

The option to adjust the surface friction velocity (U*) for low wind or stable conditions, which is a regulatory default setting, was used in this analysis.

4.2.3.1 Surface Characteristics

Additional meteorological variables and geophysical parameters are required for use in the AERMOD dispersion modeling analysis to estimate the surface energy fluxes and construct boundary-layer profiles. Surface characteristics including albedo, Bowen ratio, and surface roughness length were determined for the area surrounding the KMWH meteorological station using the AERMET surface characteristic pre-processor, AERSURFACE (Version 20060), and National Land Cover Database (NLCD) data (Multi-Resolution Land Characteristics [MRLC] Viewer; accessed November 2022) as inputs. The NLCD dataset has 30-m resolution data for tree canopy, impervious surface, and land cover categories.

Seasonal albedo and Bowen ratio values were averaged over a 10-kilometer (km) by 10-km region centered on the surface meteorological station. An unweighted arithmetic mean was used for calculating monthly albedo, and an unweighted geometric mean was used for calculating seasonal Bowen ratios. Seasonal surface roughness values were calculated using an inverse-distance-weighted geometric mean for 12 30° sectors within 1 km of the meteorological station. Figure 5 shows the land-use categorization for the analysis domain.

The AERSURFACE input file required the user to provide additional location and climatological information for the primary meteorological station to develop monthly surface parameter values. The following information about the area surrounding the meteorological station at KMWH was supplied to AERSURFACE:

- Continuous snow cover most of the winter.
- Designation for an airport location (with the assumed surface roughness calculated based on 95 percent transportation and 5 percent commercial and industrial) is appropriate for this site for all sectors.
- The region is non-arid.

- The annual average precipitation recorded near Moses Lake during 2017, 2018, and 2020 was between the 30th and 70th percentiles of precipitation over the past 30 years (average surface moisture conditions). For 2019 and 2021, average precipitation was between the 15th and 20th percentiles of precipitation over the past 30 years (dry surface moisture conditions).[3]

4.3 Modeled Pollutant Emissions

The Facility will result in potential emissions of all criteria pollutants. The "project-only" concentrations resulting from this analysis were compared to the SILs provided in WAC 173-400-113(4)(a) as screening thresholds. For this NOC application, project-only emissions included all originally permitted equipment as well as new equipment and requested Permit changes described in this document, meaning that in this case, "project-only" and "Facility-wide" are equivalent.

Ambient concentration increases calculated by AERMOD that are less than these screening thresholds indicate that the emissions attributable to the Facility will not have the potential to cause or contribute to a violation of an ambient air quality standard. If a predicted concentration were to exceed the applicable SIL, the impact of all emission units at the Facility, proposed and existing, must be considered, as well as the contribution of other nearby sources, which are typically represented by the addition of a background concentration.

Washington regulations require a demonstration that TAP emission increases attributable to new or modified emission units are sufficiently low to protect human health and safety. As discussed in Section 3.2.4, a TAP with a calculated emission increase that exceeds the applicable SQER must be modeled to obtain a predicted ambient concentration increase for comparison with the ASIL. As shown in Table 4, the increases in DMBA, DEEP, formaldehyde, H_2S, NO_2, and vanadium emissions attributable to the Facility are all greater than the applicable SQERs, and, therefore, a modeling analysis is required to predict ambient concentration increases of these pollutants attributable to the Facility.

The air pollutant emissions attributable to both already permitted and proposed equipment are summarized in Table 5 below. These emissions were provided to AERMOD, and the ambient concentrations calculated by AERMOD were compared to the SILs for criteria pollutants and the ASILs for modeled TAPs.

[3] Western US climate historical summaries are available at http://www.wrcc.dri.edu/climsum.html.

Table 5: Modeled Emission Rate per Point Source

Pollutant	Averaging Period	Units	Boiler	Main Line Dryer	Preform Line Dryer	WESP	Firewater Pump	Emergency Generator	Truck Road	Personal Vehicle Road	Freezer Road	Production AHU	Freezer AHU
Criteria Air Pollutants													
NO_X	Annual	tpy	1.62E+01	-	-	-	1.02E-01	7.39E-02	-	-	-	2.21E+01	4.01E-01
	1-hr	lb/hr	3.70E+00	-	-	-	2.04E+00	1.48E+00	-	-	-	5.05E+00	9.15E-02
CO	1-hr and 8-hr	lb/hr	4.11E+00	-	-	-	5.40E-01	4.65E-01	-	-	-	4.24E+00	7.69E-02
SO_2	1-hr and 3-hr	lb/hr	1.02E+00	-	-	-	3.39E-03	2.51E-03	-	-	-	3.03E-02	5.49E-04
PM_{10}	24-hr	lb/hr	7.65E-01	9.08E-01	4.97E-01	1.39E+00	3.54E-03	1.94E-03	1.02E+00	1.46E-01	1.21E+00	3.84E-01	6.96E-03
$PM_{2.5}$	Annual	tpy	3.35E+00	3.97E+00	2.18E+00	6.08E+00	4.24E-03	2.33E-03	4.57E-02	6.54E-03	5.43E-02	1.68E+00	3.05E-02
	24-hr	lb/hr	7.65E-01	9.08E-01	4.97E-01	1.39E+00	3.54E-03	1.94E-03	2.51E-01	3.59E-02	2.98E-01	3.84E-01	6.96E-03
Toxic Air Pollutants													
7,12-Dimethylbenz(a)anthracene	year	tpy	7.06E-06	-	-	-	-	-	-	-	-	3.54E-06	6.42E-08
DEEP	year	tpy	-	-	-	-	4.24E-03	2.33E-03	-	-	-	-	-
Formaldehyde	year	tpy	3.31E-02	-	-	-	1.41E-03	1.04E-03	-	-	-	1.66E-02	3.01E-04
Hydrogen Sulfide	24-hr	lb/hr	1.37E-02	-	-	-	-	-	-	-	-	-	-
NO_2	1-hr	lb/hr	3.70E+00	-	-	-	2.04E+00	1.48E+00	-	-	-	5.05E+00	9.15E-02
Vanadium	24-hr	lb/hr	2.32E-04	-	-	-	-	-	-	-	-	1.16E-04	2.11E-06

Abbreviations and Acronyms:

AHU = air-handling unit
CO = carbon monoxide
DEEP = diesel engine exhaust particulate matter
lb/hr = pounds per hour
NO_2 = nitrogen dioxide
NO_X = oxides of nitrogen
$PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns
SO_2 = sulfur dioxide
tpy = tons per year

4.4 Emission Unit Release Parameters

Figure 2 shows the Facility layout superimposed on a recent satellite image of the region, with locations of proposed emission units indicated, as well as significant structures that could potentially influence dispersion.

Table 6 below provides a summary of the parameters used to represent point source exhaust from the boiler, WESP, dryer vents, firewater pump, and emergency generator.

Table 6: Modeled Exhaust Parameters and Stack Dimensions

Source	Model Source ID	Exhaust Temperature (°F)	Stack Height (ft)	Exhaust Flow (cfm)	Velocity (ft/min)	Stack Diameter (in)
Boiler	BOILER	291	65	31,595	3,284	42
Fryer WESP	WESP	175	85	20,410	2,226	41
Main Dryer (four stacks)	MLDRY1-4	127	60	16,400	5,445	24
Form Dryer	PREDRY	109	60	10,001	1,872	31
Diesel Fire Water Pump	EGFWP1	842	20.0	1,867	9,509	6
Emergency Generator	EGEN1	950	5.8	1,197	12,441	4.2

Abbreviations and Acronyms:
cfm = cubic feet per minute
EGEN = emergency generator
°F = degrees Fahrenheit
ft = feet
ft/min = feet per minute
FWP = firewater pump
in = inches
WESP = wet electrostatic precipitator

Table 7 below provides a summary of the volume sources representing entrained dust emissions from trucks operated on paved roadways and fugitive combustion emissions from AHUs providing heat to the process and high bay freezer office buildings. The paved roadways volume sources were developed using methodology from EPA's Haul Road Workgroup final report (EPA 2012). The AHU volume sources were based on the individual building dimensions and EPA guidance (EPA 1995).

Table 7: Modeled Parameters for Volume Sources

Source	Model Source ID	Height (m)	Sy (m)	Sz (m)
Truck Road	TE001-TE169	2.55	4.19	2.37
Personal Vehicle Road	PV001-PV230	1.53	3.63	1.42
Freezer Road	FB001-FB170	2.55	4.19	2.37
Production AHU	PROD_AHU1-6	15.24	21.77	7.09
Freezer AHU	HBF_AHU	10.67	7.21	4.96

Abbreviations and Acronyms:

AHU = air-handling unit
m = meters
S_y = Sigma Y
S_z = Sigma Z

In addition to the exhaust parameters discussed above, the building dimensions and Facility configuration were provided to AERMOD to assess potential downwash effects. Wind direction-specific building profiles were prepared for the modeling using the EPA's Building Profile Input Program (BPIP) including the PRIME algorithm (BPIP PRIME). The Facility layout and heights of structures, as shown on Figure 2 and in Table 8 below, were provided to BPIP PRIME, which calculated the necessary input data for AERMOD.

Table 8: Significant Onsite Structure Heights

Structure	BPIP ID	Height Above Grade	
		(ft)	(m)
Process Building	BLD01	52	16
Freezer Building	BLD07	139	42
Freezer Office Tier 1	BLD10	21	6
Freezer Office Tier 2	BLD09	42	13
Packing Tier 1	BLD06	27	8
Packing Tier 2	BLD08	44	13
Receiving Tier 1	BLD05	24	7
Receiving Tier 2	BLD04	46	14
Administrative Tier 1	BLD03	25	8
Administrative Tier 2	BLD02	29	9
Administrative Tier 3	BLD02	33	10

Abbreviations and Acronyms:

BPIP = Building Profile Input Program
ft = feet
m = meters

4.5 Results of the Criteria Pollutant Modeling Analysis

Table 9 below provides a comparison of AERMOD-predicted maximum criteria pollutant concentration increases with applicable SILs. The SILs represent incremental, project-specific impact levels that the state of Washington accepts as indicative of an insignificant impact with respect to an assessment of compliance with the NAAQS or the Washington Ambient Air Quality Standards (WAAQS). As shown in Table 9, the 1st-highest concentration predicted by AERMOD for 1-hour SO_2, 24-hour average PM_{10}, 24-hour average and annual average $PM_{2.5}$, and 1-hour average and annual average NO_2 exceed the corresponding SILs. As a result, a cumulative analysis is required to determine compliance with the NAAQS, which was accomplished by adding a representative background concentration to the Facility-wide modeling results, which is outlined in the next section.

Table 9: Modeled Exhaust Parameters and Stack Dimensions

Pollutant	Averaging Period	Maximum Concentration (µg/m³)	SIL (µg/m³)	Greater Than SIL?[a]
CO	8-Hour	48	500	No
	1-Hour	153	2,000	No
SO_2	3-Hour	9	25	No
	1-Hour	14	7.8	**Yes**
PM_{10}	24-Hour	18	5	**Yes**
$PM_{2.5}$	Annual	2	0.2	**Yes**
	24-Hour	11	1.2	**Yes**
NO_2	Annual	6	1	**Yes**
	1-Hour	122	7.5	**Yes**

Notes:
(a) SIL = significant impact level, from WAC 173-400-113.

Abbreviations and Acronyms:
CO = carbon monoxide
µg/m³ = micrograms per cubic meter
NO_2 = nitrogen dioxide
$PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns
SIL = significant impact level
SO_2 = sulfur dioxide

4.6 Ambient Standard Compliance Demonstration

Because the predicted 1-hour SO_2, 24-hour average PM_{10}, 24-hour and annual average $PM_{2.5}$, and 1-hour and annual average NO_2 project-only concentrations exceeded the SILs, a cumulative analysis is required to assess compliance with the ambient standards associated with those pollutants and averaging periods. A cumulative modeling analysis may include nearby emission units as well as representative background concentrations. As there are no competing nearby sources of emissions with exhaust

plumes expected to overlap with exhaust plumes from the Facility and background concentrations are representative of existing concentrations around the Facility, only project emission units, which in this case are equivalent to Facility wide, are required for the cumulative analysis.

The results of the cumulative modeling analysis are summarized below in Table 10, where the model-predicted design concentrations, with representative background concentrations added, are shown to be less than the applicable ambient standards in all cases.

Table 10: Predicted Cumulative Design Concentrations

Pollutant	Averaging Period	Concentration (µg/m³)			NAAQS/WAAQS (µg/m³)	Greater Than NAAQS/WAAQS?
		Design	Background [e]	Total [f]		
SO_2	1-Hour [a]	12	12	24	200	No
PM_{10}	24-Hour [b]	9	80	89	150	No
$PM_{2.5}$	Annual [c]	2.1	5.7	7.8	9	No
	24-Hour [d]	7	17	24	35	No
NO_2	Annual [c]	6.3	4.7	11.0	100	No
	1-Hour [c]	109	26	134	188	No

Notes:

a. Design concentration is the highest 5-year average of the 4th-high.

b. Design concentration is the highest 6th-high 24-hour average concentration over 5 modeled years.

c. Design concentration is highest annual average concentration over 5 modeled years.

d. Design concentration is the highest 5-year average of the 8th-high.

e. Regional background level obtained from Idaho Department of Environmental Quality (IDEQ) for model and monitoring data from July 2014 through June 2017 (IDEQ; accessed October 24, 2022). for coordinates: -119.1386556, 47.12408278.

f. Total concentration is the sum of the design concentration and the background concentration.

Abbreviations and Acronyms:
µg/m³ = micrograms per cubic meter
NAAQS = National Ambient Air Quality Standards
NO_2 = nitrogen dioxide
$PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns
WAAQS = Washington Ambient Air Quality Standards.

4.7 Results of the Toxic Air Pollutant Analysis

The results of the TAP dispersion modeling analysis are summarized in Table 11 below, where modeling results are compared with the applicable ASILs. As shown in the table, no TAP concentrations are greater than the applicable ASIL; therefore, further analysis is not required.

Table 11: Maximum Predicted Project-Only Toxic Air Pollutant Concentrations

Toxic Air Pollutant	CAS No.	Averaging Period	Maximum Concentration (µg/m³)	ASIL (µg/m³)	Over ASIL?
DMBA	57-97-6	Annual	1.58E-06	8.50E-06	No
DEEP	—	Annual	0.0008	0.0033	No
Formaldehyde	50-00-0	Annual	0.008	0.17	No
H_2S	7783-06-4	24-hour	0.04	2	No
NO_2	10102-44-0	1-hour	130	470	No
Vanadium	7440-62-2	24-hour	0.001	0.1	No

Abbreviations and Acronyms:

ASIL = acceptable source impact level
CAS = Chemical Abstracts Service
DEEP = diesel engine exhaust particulate matter
µg/m³ = micrograms per cubic meter
NO_2 = nitrogen dioxide

4.8 Conclusions

The AERMOD modeling, conducted using the methodology described above, predicted that emissions attributable to the Facility will not cause or contribute to an exceedance of any ambient standards, and TAP emissions are sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects.

5.0 USE OF THIS REPORT

This report has been prepared for the exclusive use of J.R. Simplot Company and applicable regulatory agencies for specific application to the proposed potato-processing facility located near Moses Lake, Washington. No other party is entitled to rely on the information, conclusions, and/or recommendations included in this document without the express written consent of Landau. Further, the reuse of information, conclusions, and/or recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau, shall be at the user's sole risk. Landau warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. Landau makes no other warranty, either express or implied.

6.0 REFERENCES

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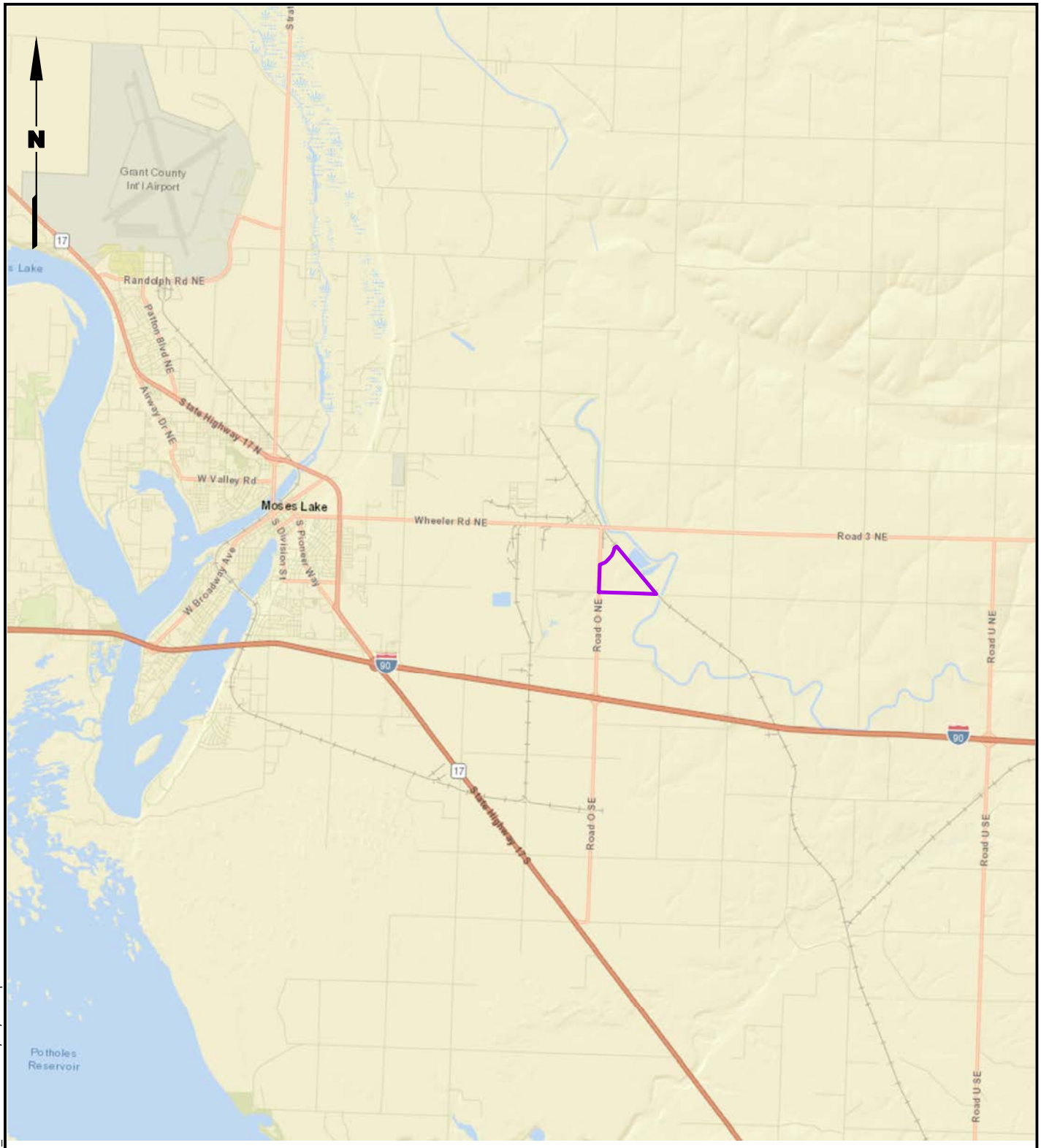


Legend

Property Boundary

0 2.5 5

Kilometers

Note

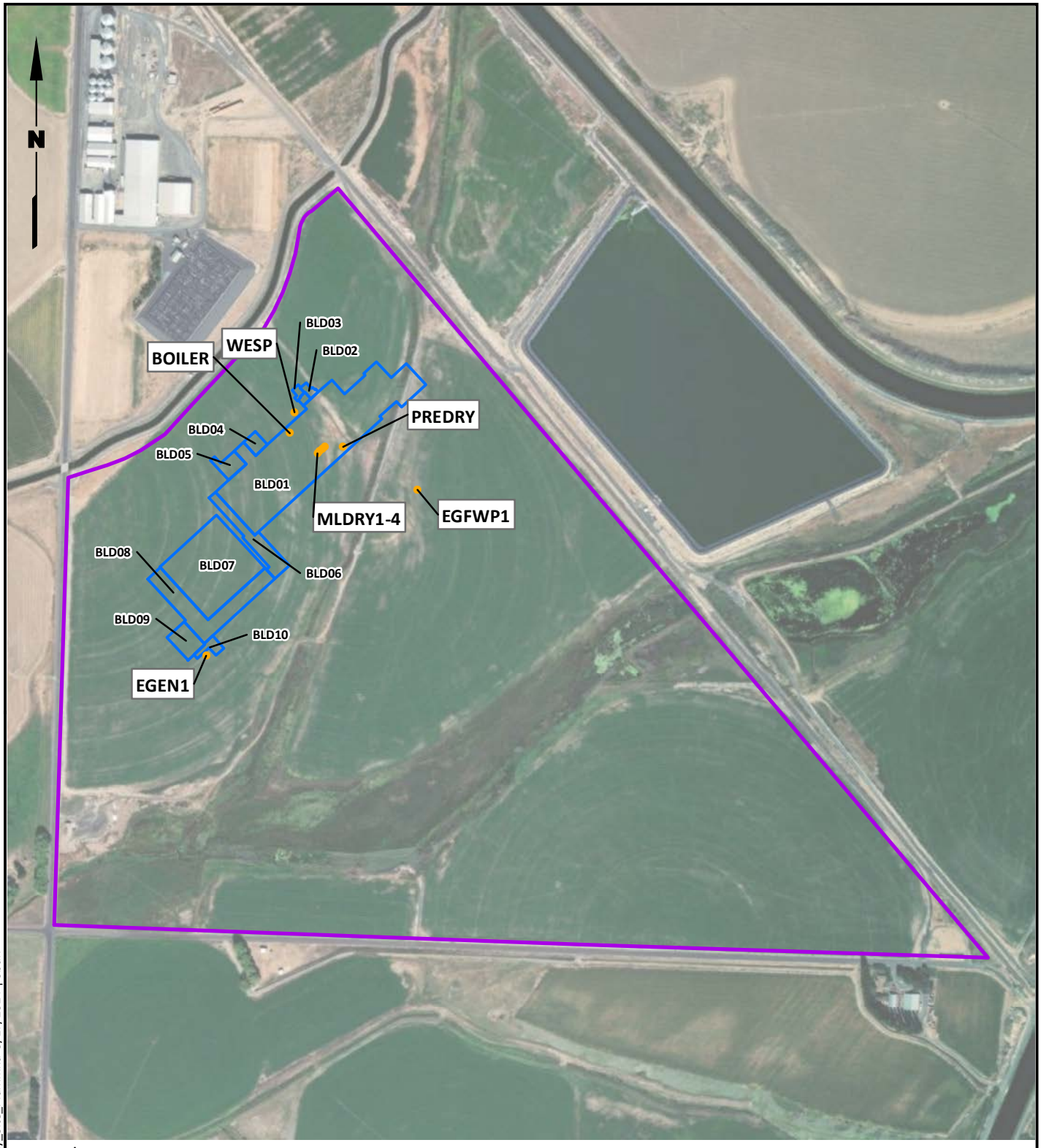
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Base Map Source: Esri Imagery, 2022.

F:\313Simplot\Plots\GIS\01_Facility_Location.mxd 11/18/2022 | sburr

LANDAU ASSOCIATES

Simplot Project Rainier Moses Lake, Washington	**Facility Location**	Figure 1



Legend

- Point Sources
- Buildings
- Property Boundary

0 200 400

Meters

Note

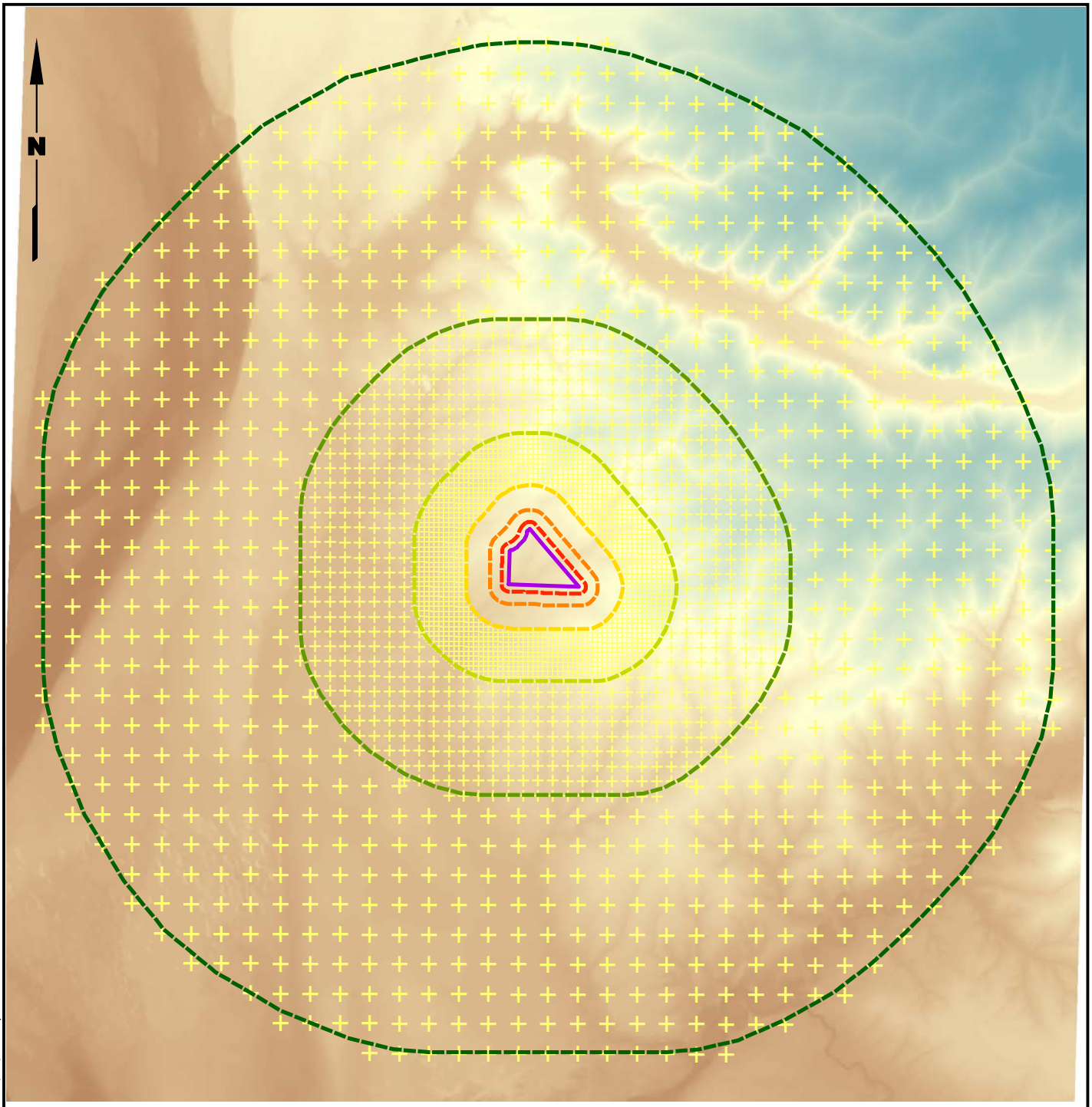
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Base Map Source: Esri Imagery, 2022.

G:\Projects\313\002\020\02_Facility_Site_Plan.mxd 9/17/2024 | sburr

LANDAU ASSOCIATES

Simplot Project Rainier Moses Lake, Washington	**Facility Site Plan**	Figure 2



Legend

Receptor Grid Extent
- 10,000 m
- 4,500 m
- 2,000 m
- 900 m
- 400 m
- 150 m

Elevation (m)
- High : 498
- Low : 318

- Property Boundary
- Receptor

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 2.5 5
Kilometers

Base Map Source: Esri Imagery, 2022.

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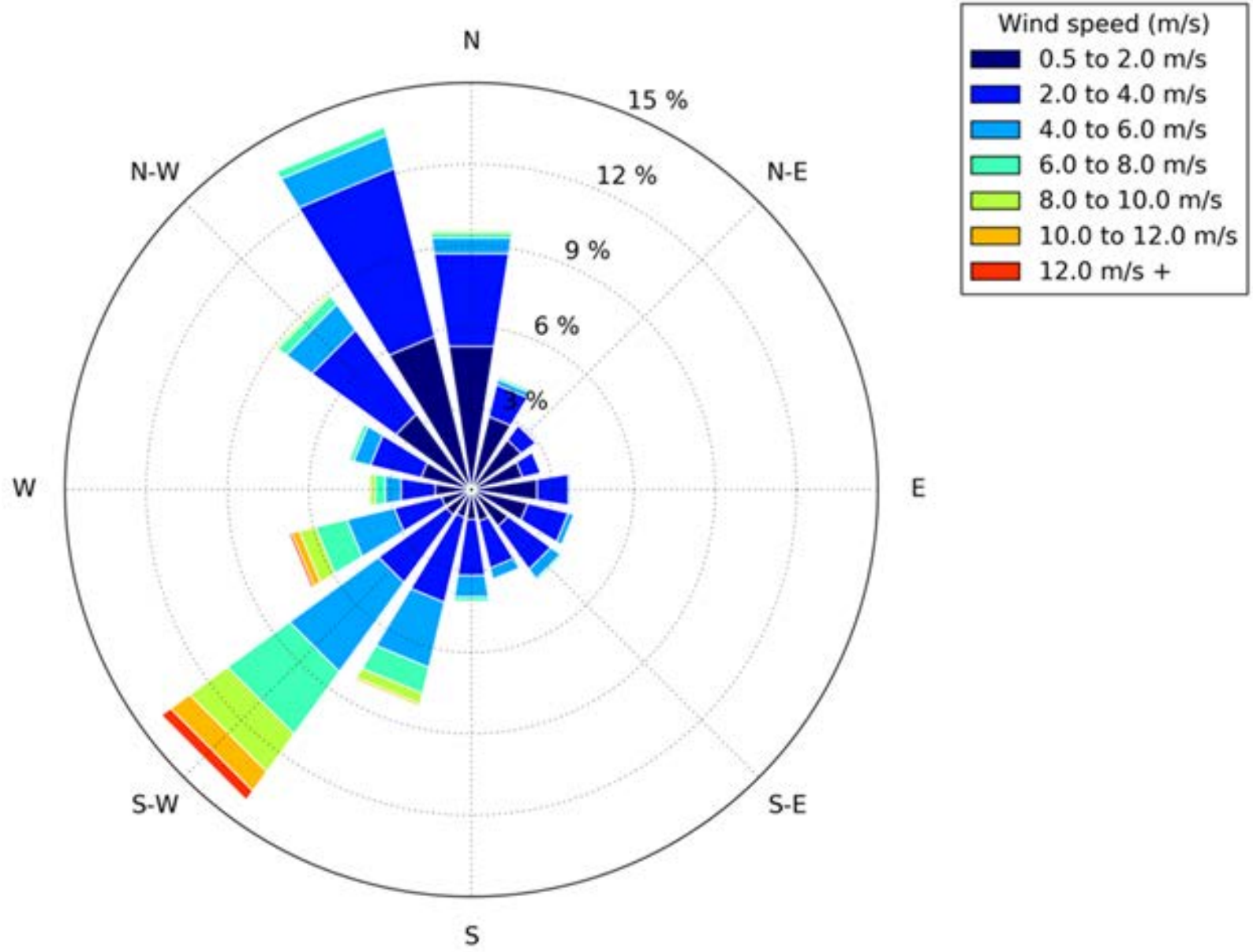
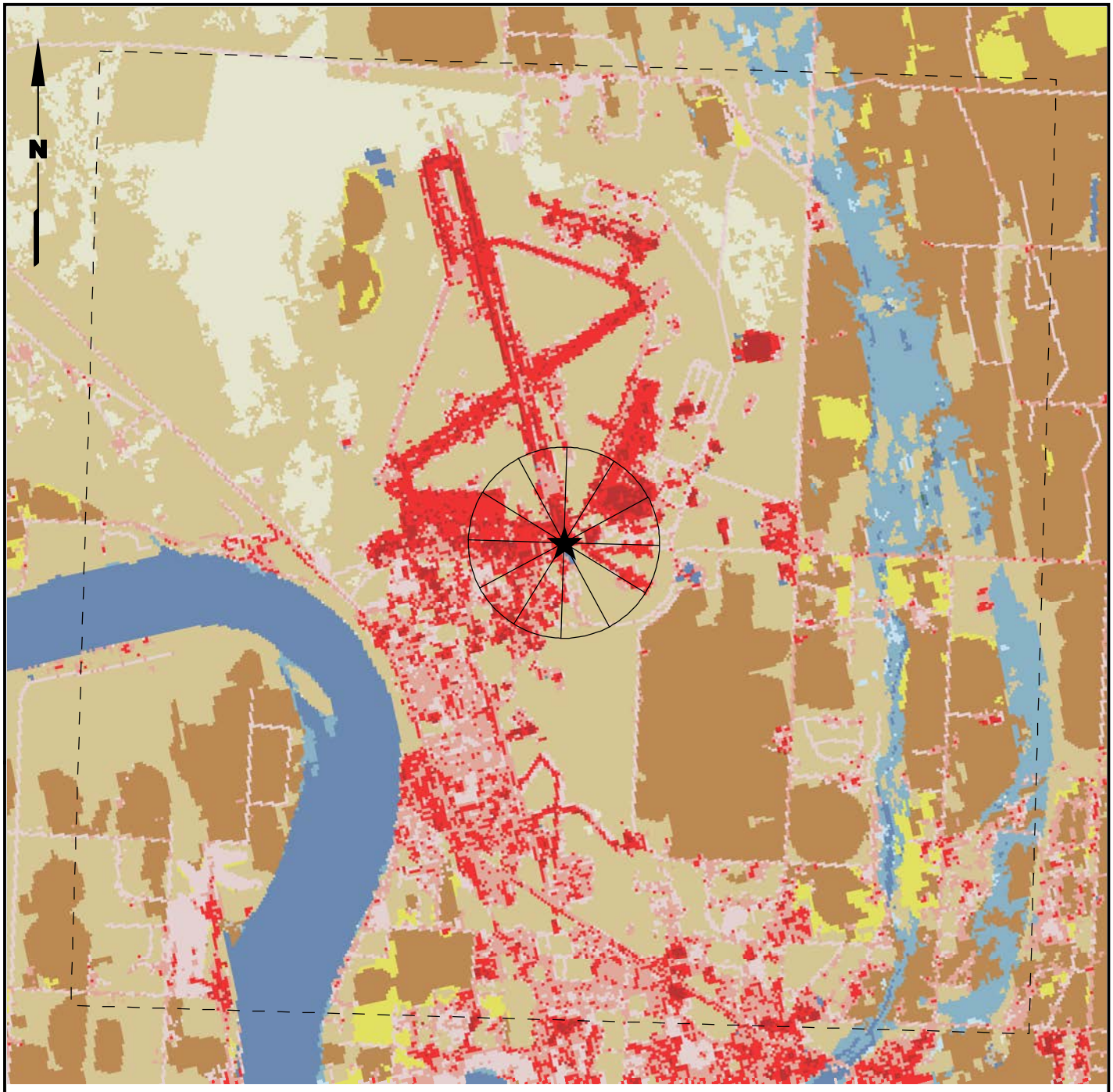
LANDAU ASSOCIATES

Simplot Project Rainier Moses Lake, Washington	**Receptor Locations**	Figure 3



Simplot Project Rainier Moses Lake, Washington	**Grant County Airport Windrose**	Figure 4

LANDAU ASSOCIATES



Legend

NLCD 2016

- 11
- 21
- 22
- 23
- 24
- 31
- 42
- 52
- 71
- 81
- 82
- 90
- 95

Meteorological Station (KMWH)

Albedo and Bowen Ratio Analysis Domain

Surface Roughness Analysis Domain and Sectors

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 1.5 3

Kilometers

Base Map Source: Esri Imagery, 2022.

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LANDAU ASSOCIATES

Simplot Project Rainier Moses Lake, Washington	**Grant County Land Use Classification**	Figure 5

APPENDIX A

Notice of Construction Application Form

Notice of Construction Application

A notice of construction permit is required before installing a new source of air pollution or modifying an existing source of air pollution. This application applies to facilities in Ecology's jurisdiction. Submit this application for review of your project. For general information about completing the application, refer to Ecology Forms ECY 070-410a-g, "Instructions for Ecology's Notice of Construction Application."

Ecology offers up to two hours of free pre-application assistance. We encourage you to schedule a pre-application meeting with the contact person specified for the location of your proposal, below. If you use up your two hours of free pre-application assistance, we will continue to assist you after you submit Part 1 of the application and the application fee. You may schedule a meeting with us at any point in the process.

Upon completion of the application, please enclose a check for the initial fee and mail to:

Department of Ecology
Cashiering Unit
PO Box 47611
Olympia, WA 98504-7611

For Fiscal Office Use Only: 0299-3030404-B00-216--001--000404

Check the box for the location of your proposal. For assistance, call the appropriate office listed below:

Check box	Ecology Permitting Office	Contact
☐	**Chelan, Douglas, Kittitas, Klickitat, or Okanogan County** Ecology Central Regional Office (509) 575-2490	Lynnette Haller (509) 457-7126 lynnette.haller@ecy.wa.gov
☑	**Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Stevens, Walla Walla, or Whitman County** Ecology Eastern Regional Office (509) 329-3400	Karin Baldwin (509) 329-3452 karin.baldwin@ecy.wa.gov
☐	**San Juan County** Ecology Northwest Regional Office (206) 594-0000	David Adler (425) 649-7267 david.adler@ecy.wa.gov
☐	**For actions taken at Kraft and Sulfite Paper Mills and Aluminum Smelters Only** Ecology Industrial Section (360) 407-6900	James DeMay (360) 407-6868 james.demay@ecy.wa.gov
☐	**For actions taken on the US Department of Energy Hanford Reservation Only** Ecology Nuclear Waste Program (509) 372-7950	Lilyann Murphy (509) 372-7951 lilyann.murphy@ecy.wa.gov

Check the box below for the fee that applies to your application.

New project or equipment:

- [x] **$1,904: Basic project** initial fee covers up to 16 hours of review.
- [ ] **$12,614: Complex project** initial fee covers up to 106 hours of review.

Change to an existing permit or equipment:

- [ ] **$357: Administrative or simple change** initial fee covers up to 3 hours of review. Ecology may determine your change is complex during the completeness review of your application. If you project is complex, you must pay the additional xxx before we will continue working on your application
- [ ] **$1,190: Complex** change initial fee covers up to 10 hours of review
- [ ] **$350flat fee**: Replace or alter control technology equipment under WAC 173-400-114. Ecology will contact you if we determine your change belongs in another fee category. You must pay the fee associated with that category before we will continue working on your application.

Read each statement below, then check the box next to it to acknowledge that you agree.

- [x] The initial fee you submitted may not cover the cost of processing your application. Ecology will track the number of hours spent on your project. If the number of hours Ecology spends exceeds the hours included in your initial fee, Ecology will bill you $119 per hour for the extra time.
- [x] You must include all information requested by this application. Ecology may not process your application if it does not include all the information requested.
- [x] Submittal of this application allows Ecology staff to visit and inspect your facility.

Part 1: General Information

I. Project, Facility, and Company Information

1. Project Name: Project Rainier
2. Facility Name: Rainier Plant
3. Facility Street Address:
   2107 Road O NE, Moses Lake, WA 98837
4. Facility Legal Description: South half and NW1/4 of Section 22, Township 19N, Range 29E
5. Company Legal Name (if different from Facility Name):
   Simplot U.S. Food Group Holdings, LLC
6. Company Mailing Address (street, city, state, zip)

   P.O. Box 27, Boise, Idaho 83707

II. Contact Information and Certification

1. Facility Contact Name (who will be onsite): Andrew Erickson
2. Facility Contact Mailing Address (if different than Company Mailing Address:
   14124 Wheeler Road NE, Moses Lake, Wa. 98837

3. Facility Contact Phone Number: (509) 750-1532
4. Facility Contact E-mail: andrew.erickson@simplot.com
5. Billing Contact Name (who should receive billing information):
   Andrew Erickson
6. Billing Contact Mailing Address (if different Company Mailing Address):

   1201 North Broadway, Othello, WA 99344

7. Billing contact Phone Number: (509) 750-1532
8. Billing Contact E-mail: andrew.erickson@simplot.com
9. Consultant Name (optional – if 3rd party hired to complete application elements):
   Kyle Heitkamp
10. Consultant Organization/Company: Landau Associates
11. Consultant Mailing Address (street, city, state, zip): 155 NE 100th St, Ste 302, Seattle WA 98125
12. Consultant Phone Number: (206) 631-8683
13. Consultant E-mail: kheitkamp@landauinc.com
14. Responsible Official Name and Title (who is responsible for project policy or decision making):
    James Kim, Senior Director North American Operations
15. Responsible Official Phone: (208) 780-2312
16. Responsible Official E-mail: james.kim@simplot.com
17. Responsible Official Certification and Signature:

    I certify that the information on this application is accurate and complete.

Signature: _____ Date: 12/9/2024

Part 2: Technical Information

The Technical Information may be sent with this application form to the Cashiering Unit, or may be sent directly to the Ecology regional office with jurisdiction along with a copy of this application form.

For all sections, check the box next to each item as you complete it.

III. Project Description

- [x] Written narrative describing your proposed project.
- [x] Projected construction start and completion dates.
- [x] Operating schedule and production rates.
- [x] List of all major process equipment and manufacturer and maximum rated capacity.
- [x] Process flow diagram with all emission points identified.
- [x] Plan view site map.
- [x] Manufacturer specification sheets for major process equipment components
- [x] Manufacturer specification sheets for pollution control equipment.
- [x] Fuel specifications, including type, consumption (per hour and per year) and percent sulfur.

IV. State Environmental Policy Act (SEPA) Compliance

Check the appropriate box below.

- [x] SEPA review is complete. Include a copy of the final SEPA checklist and SEPA determination (e.g., DNS, MDNS, and EIS) with your application.
- [ ] SEPA review has not been conducted:
  - [ ] If review will be conducted by another agency, list the agency. You must provide a copy of the final SEPA checklist and SEPA determination before Ecology will issue your permit. Agency reviewing SEPA: _____
  - [ ] If the review will be conducted by Ecology, fill out a SEPA checklist and submit it with your application. You can find a SEPA checklist online at https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-document-templates

V. Emissions Estimations of Criteria Pollutants

Does your project generate criteria air pollutant emissions? [x] **Yes** [ ] **No**

If yes, please proved the following information regarding your criteria emissions in the application.

- [x] The names of the criteria air pollutants emitted (i.e., NO_X, SO_2, CO, $PM_{2.5}$, PM_{10}, TSP, VOC, and Pb)
- [ ] Potential emissions of criteria air pollutants in tons per hour, tons per day, and tons per year (include calculations)
- [x] If there will be any fugitive criteria pollutant emissions, clearly identify the pollutant and quantity

VI. Emissions Estimations of Toxic Air Pollutants

Does your project generate toxic air pollutant emissions? [x] **Yes** [ ] **No**

If yes, please provide the following information regarding your toxic air pollutant emissions in your application.

- [x] The names of the toxic air pollutants emitted (specified in WAC 173-460-150[1])
- [x] Potential emissions of toxic air pollutants in pounds per hour, pounds per day, and pounds per year (include calculations)
- [x] If there will be any fugitive toxic air pollutant emissions, clearly identify the pollutant and quantity

VII. Emission Standard Compliance

- [x] Provide a list of all applicable new source performance standards, national emission standards for hazardous air pollutants, national emission standards for hazardous air pollutants for source categories, and emission standards adopted under Chapter 70A.15 RCW.

Does your project comply with all applicable standards identified? [x] Yes [ ] No

VIII. Best Available Control Technology

- [x] Provide a complete evaluation of Best Available Control Technology (BACT) for your proposal.

IX. Ambient Air Impacts Analyses

Please provide the following:

- [x] Ambient air impacts analyses for Criteria Air Pollutants (including fugitive emissions)
- [x] Ambient air impacts analyses for Toxic Air Pollutants (including fugitive emissions)
- [x] Discharge point data for each point included in air impacts analyses (include only if modeling is required)
  - [x] Exhaust height
  - [x] Exhaust inside dimensions (ex. diameter or length and width)
  - [x] Exhaust gas velocity or volumetric flow rate
  - [x] Exhaust gas exit temperature
  - [x] The volumetric flow rate
  - [x] Description of the discharges (i.e., vertically or horizontally) and whether there are any obstructions (ex., raincap)
  - [x] Identification of the emission unit(s) discharging from the point
  - [x] The distance from the stack to the nearest property line
  - [x] Emission unit building height, width, and length
  - [x] Height of tallest building on-site or in the vicinity and the nearest distance of that building to the exhaust
  - [x] Whether the facility is in an urban or rural location

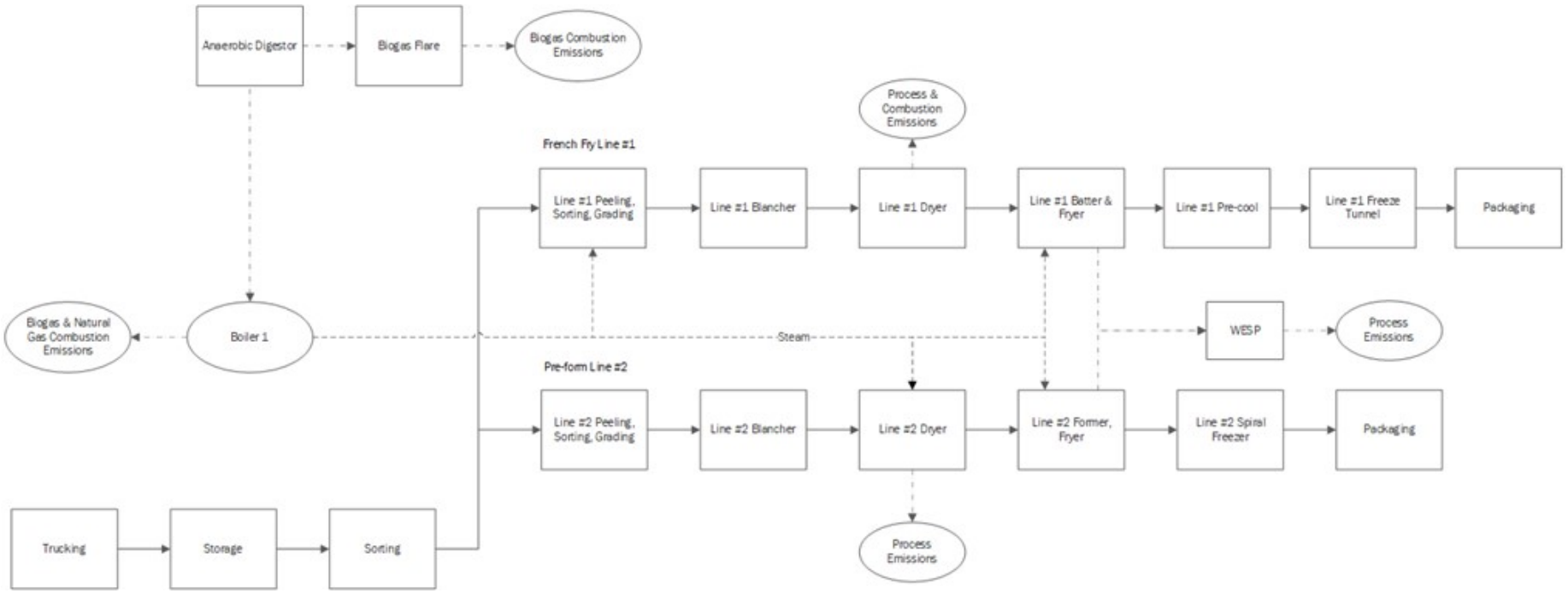
Does your project cause or contribute to a violation of any ambient air quality standard or acceptable source impact level? [ ] Yes [x] No

To request ADA accommodation, call Ecology at (360) 407-6800, 711 (relay service), or (877) 833-6341 (TTY)

[1] http://apps.leg.wa.gov/WAC/default.aspx?cite=173-460-150

APPENDIX B

Process Flow Diagram



LANDAU ASSOCIATES	Simplot Project Rainier Moses Lake, Washington	**Process Flow Diagram**

Figure
B-1

APPENDIX C

Detailed Emission Calculations

Abbreviations and Acronyms
J.R. Simplot Rainier Plant
Moses Lake, Washington

Abbreviations and Acronyms:

BACT	best available control technology
Btu	British thermal unit
cf	cubic feet
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COD	chemical oxygen demand
DEEP	diesel engine exhaust particulate matter
dscf	dry standard cubic feet
dscfm	dry standard cubic feet per minute
EPA	United States Environmental Protection Agency
FWP	fire water pump
GHG	greenhouse gases
H_2S	hydrogen sulfide
HAP	hazardous air pollutants
HHV	higher heating value
hp	horsepower
hp-hr	horsepower hour
hr	hour
lb	pound
lb/hr	pounds per hour
Mlb	thousand pounds
MMBtu	million British thermal units
MMscf	million standard cubic feet
NO_X	nitrogen oxides
N_2O	nitrous oxide
O_2	oxygen
PAH	polycyclic aromatic hydrocarbons
PM	particulate matter
PM_{10}	particulate matter with aerodynamic diameter less than or equal to 10 microns
$PM_{2.5}$	particulate matter with aerodynamic diameter less than or equal to 2.5 microns
ppm	parts per million
ppmvd	parts per million by volume, dry basis
SO_2	sulfur dioxide
TAPs	toxic air pollutants
tpy	tons per year
ULSD	ultra-low sulfur diesel
VMT	vehicle miles travelled
VOCs	volatile organic compounds
WESP	wet electrostatic precipitator
yr	year

Equipment Summary and Operating Rates
J.R. Simplot Rainier Plant
Moses Lake, Washington

Equipment	Maximum Firing Rate	Throughput	Hours of Operation	
			Annual	Daily
Boiler	102.7 MMBtu/hr	--	8,760 hr/yr	24 hr/day
Fryer (Steam Heated)	--	74 Mlb/hr	8,760 hr/yr	24 hr/day
Main Dryer (Steam Heated)	--	61 Mlb/hr	8,760 hr/yr	24 hr/day
Form Dryer (Steam Heated)	--	13,750 lb/hr	8,760 hr/yr	24 hr/day
Production Air Handling Units	51.5 MMBtu/hr	--	8,760 hr/yr	24 hr/day
High Bay Freezer Air Handling Units	0.93 MMBtu/hr	--	8,760 hr/yr	24 hr/day
Diesel Firewater Pump 1	350 hp	16.1 gal/hr	100 hr/yr	60 min/day
Diesel Emergency Generator	237 hp	--	100 hr/yr	60 min/day

Table 2
Natural Gas and Biogas Boiler 1
J.R. Simplot Rainier Plant
Moses Lake, Washington

Parameter	Value	
Operating hours	8,760	hours/year
Heat Input Capacity (HHV)	103	MMBtu/hr
Natural Gas Heat Content	1,020	btu/scf
Maximum Biogas Flow Rate	750	cfm
Biogas Heat Content	600	btu/scf
Biogas Heat Capacity	27	MMBtu/hr

Pollutant	Emission Factor		Emission Rate Hourly (lb/hr)	Emission Rate Annual (tpy)
Criteria Pollutant Emissions				
NO_X Natural Gas	0.036 lb/MMBtu	[a]	3.7	16
NO_X Biogas	0.0336 lb/MMBtu	[a]		
CO Natural Gas	0.04 lb/MMBtu	[a]	4.1	18
CO Biogas	0.04 lb/MMBtu	[a]		
SO_2 Natural Gas	0.6 lb/MMscf	[c]	1.02	4.5
SO_2 Biogas	0.036 lb/MMBtu	[c]		
PM_{10} (Filt. & Cond.)	0.0075 lb/MMBtu	[b]	0.77	3.4
$PM_{2.5}$ (Filt.& Cond.)	0.0075 lb/MMBtu	[b]	0.77	3.4
VOC	0.0054 lb/MMBtu	[b]	0.55	2.4
Lead	4.9E-07 lb/MMBtu	[b]	5.0E-05	2.2E-04
Greenhouse Gas Emissions				
CO_2	117 lb/MMBtu	[d]	12,005	52,580
CH_4	2.2E-03 lb/MMBtu	[d]	0.23	1.0
N_2O	2.2E-04 lb/MMBtu	[d]	0.023	0.10
CO_2e	117 lb/MMBtu	[e]	12,017	52,634
Toxic and Hazardous Air Pollutant Emissions				
Acetaldehyde	9.0E-04 lb/MMscf	[f]	9.1E-05	4.0E-04
Acrolein	8.0E-04 lb/MMscf	[f]	8.1E-05	3.5E-04
Arsenic	2.0E-04 lb/MMscf	[b]	2.0E-05	8.8E-05
Benzene	2.1E-03 lb/MMscf	[b]	2.1E-04	9.3E-04
Beryllium	1.2E-05 lb/MMscf	[b]	1.2E-06	5.3E-06
Cadmium	1.1E-03 lb/MMscf	[b]	1.1E-04	4.9E-04
Chromium(total)	1.4E-03 lb/MMscf	[b]	1.4E-04	6.2E-04
Cobalt	8.4E-05 lb/MMscf	[b]	8.5E-06	3.7E-05
Copper	8.5E-04 lb/MMscf	[b]	8.6E-05	3.7E-04
Ethylbenzene	2.0E-03 lb/MMscf	[f]	2.0E-04	8.8E-04
Formaldehyde	7.5E-02 lb/MMscf	[b]	7.6E-03	3.3E-02
Hexane	1.8E+00 lb/MMscf	[b]	1.8E-01	7.9E-01
Hydrogen sulfide	1.4E-01 lb/MMscf	[c]	1.4E-02	6.0E-02
Manganese	3.8E-04 lb/MMscf	[b]	3.8E-05	1.7E-04
Mercury	2.6E-04 lb/MMscf	[b]	2.6E-05	1.1E-04
Nickel	2.1E-03 lb/MMscf	[b]	2.1E-04	9.3E-04
PAH's (including Naphthalene)	4.0E-04 lb/MMscf	[f]	4.0E-05	1.8E-04
Polycyclic Organic Matter				
2-Methylnaphthalene	2.4E-05 lb/MMscf	[b]	2.4E-06	1.1E-05

Table 2
Natural Gas and Biogas Boiler 1
J.R. Simplot Rainier Plant
Moses Lake, Washington

3-Methylchloranthrene	1.8E-06	lb/MMscf	[b] 1.8E-07	7.9E-07
7,12-Dimethylbenz(a)anthracene	1.6E-05	lb/MMscf	[b] 1.6E-06	7.1E-06
Acenaphthene	1.8E-06	lb/MMscf	[b] 1.8E-07	7.9E-07
Acenaphthylene	1.8E-06	lb/MMscf	[g] 1.8E-07	7.9E-07
Anthracene	2.4E-06	lb/MMscf	[b] 2.4E-07	1.1E-06
Benz(a)anthracene	1.8E-06	lb/MMscf	[b] 1.8E-07	7.9E-07
Benzo(a)pyrene	1.2E-06	lb/MMscf	[b] 1.2E-07	5.3E-07
Benzo(b)fluoranthene	1.8E-06	lb/MMscf	[b] 1.8E-07	7.9E-07
Benzo(g,h,i)perylene	1.2E-06	lb/MMscf	[b] 1.2E-07	5.3E-07
Benzo(k)fluoranthene	1.8E-06	lb/MMscf	[b] 1.8E-07	7.9E-07
Chrysene	1.8E-06	lb/MMscf	[b] 1.8E-07	7.9E-07
Dibenzo(a,h)anthracene	1.2E-06	lb/MMscf	[b] 1.2E-07	5.3E-07
Dichlorobenzene	1.2E-03	lb/MMscf	[b] 1.2E-04	5.3E-04
Fluoranthene	3.0E-06	lb/MMscf	[b] 3.0E-07	1.3E-06
Fluorene	2.8E-06	lb/MMscf	[b] 2.8E-07	1.2E-06
Indeno(1,2,3-cd)pyrene	1.8E-06	lb/MMscf	[b] 1.8E-07	7.9E-07
Naphthalene	6.1E-04	lb/MMscf	[b] 6.1E-05	2.7E-04
Phenanathrene	1.7E-05	lb/MMscf	[g] 1.7E-06	7.5E-06
Pyrene	5.0E-06	lb/MMscf	[b] 5.0E-07	2.2E-06
Propylene	1.6E-02	lb/MMscf	[f] 1.6E-03	6.8E-03
Selenium	2.4E-05	lb/MMscf	[b] 2.4E-06	1.1E-05
Toluene	7.8E-03	lb/MMscf	[f] 7.9E-04	3.4E-03
Vanadium	2.3E-03	lb/MMscf	[b] 2.3E-04	1.0E-03
Xylenes	5.8E-03	lb/MMscf	[f] 5.8E-04	2.6E-03
Total HAPs	2.0E+00	lb/MMscf	2.1E-01	9.0E-01

Notes:

[a] NO_X and CO emissions based on manufacturer performance guarantees for natural gas and biogas. Ben Hawkes email on 11/19/24 indicated that a Cleaver Brooks project manager guarantees a CO emission factor of 0.04 lb/MMBtu for both natural gas and biogas. NOx emissions are calculated using the higher emission rate (natural gas) for the entire heat input capacity as a worst-case.

[b] Natural gas emission factors based on AP-42, Section 1.4 (Natural Gas Combustion) calculated as lb/MMBtu using natural gas heat content (1,020 btu/cf). The boiler is also capable of burning biogas from anaerobic digester. Biogas composition is similar to natural gas so emission factors from AP-42, Section 1.4 are appropriate for biogas combustion in the boiler for all pollutants except SO_2.

[c] The boiler is capable of burning biogas from anaerobic digester. The SO_2 emission rate represents the worst-case scenario of burning all of the produced biogas (see Table 6) and the remainder of the maximum heat input capacity from natural gas. The emission factor for natural gas of 0.6 lb/MMscf is from AP-42 Section 1.4. The emission factor for biogas of 0.036 lb/MMBtu is based on manufacturer guarantees. Between 98% and 100% of the H_2S is converted to SO_2 during combustion. To provide the most conservative assumption for each polltuant, the calculated maximum potential SO_2 emissions rate is based on 100% conversion of H_2S to SO_2 and the H_2S emission rate is based on 98% conversion of H_2S to SO_2.

[d] Greenhouse gas emission factors from 40 CFR 98, Subpart C, Table C-1.

[e] CO_2e calculated based on global warming potential for each greenhouse gas: CO_2 = 1; CH_4 = 25; and N_2O = 298 (40 CFR Part 98, Subpart A).

[f] Emission Factors from Ventura County Air Pollution Control District AB2588 for natural gas fired boilers rated >100

Table 2
Natural Gas and Biogas Boiler 1
J.R. Simplot Rainier Plant
Moses Lake, Washington

MMBTU/hr. Factors corrected to lb/mmBtu using natural gas heat content (1,020 btu/cf).

[g] Emission Factors from EPA WebFIRE emissions factor search. Factors corrected to lb/mmBtu using natural gas heat content (1,020 btu/cf).

6.0 BOILER PERFORMANCE DATA

Fuel: Natural Gas

Boiler load - %	100%	75%	50%	25%	10%	Units
Steam Flow - Gross Production	85,000	63,750	42,500	21,250	8,500	Lb/Hr
Net Steam Flow – To Process	85,000	63,750	42,500	21,250	8,500	Lb/Hr
Pegging Steam	-	-	-	-	-	Lb/Hr
Steam Pressure – Operating	325	325	325	325	325	PSIG
Steam Temperature	428	428	428	428	428	°F
Fuel Input (HHV)	102.7	76.7	51.0	25.7	10.5	MMBTU/Hr
Ambient Air Temperature	80	80	80	80	80	°F
Relative Humidity	60	60	60	60	60	%
Excess Air	15	15	15	25	34	%
Flue Gas Recirculation	13	13	13	13	13	%
Steam Output Duty	86.2	64.6	43.1	21.5	8.6	MMBTU/Hr
Heat Release Rate	73,781	55,080	36,617	18,434	7,539	BTU/FT3-Hr
Heat Release Rate	124,629	93,039	61,853	31,138	12,735	BTU/FT2-Hr
Furnace Heat Flux	33,987					BTU/FT2-Hr
Feed Water Temperature	227	227	227	227	227	°F
Water Temp. Leaving Economizer	330	318	305	300	301	±10°F
Blow Down	3.0	3.0	3.0	3.0	3.0	%
Boiler Gas Exit Temperature	613	558	500	453	433	±10°F
Economizer Gas Exit Temp.	291	271	253	240	232	±10°F
Air Flow	86,324	64,443	42,842	23,443	10,278	Lb/Hr
Flue Gas to Stack	90,908	67,865	45,117	24,588	10,746	Lb/Hr
Flue Gas to Stack	30,677	22,453	14,633	7,830	3,379	ACFM
Flue Gas Including FGR	102,726	76,687	50,982	27,785	12,144	Lb/Hr
Fuel Flow	4,583	3,422	2,274	1,145	468	Lb/Hr
Flue Gas Losses/Efficiency-%						
Dry Gas Loss	4.0	3.6	3.2	3.3	3.4	%
Air Moisture Loss	0.1	0.1	0.1	0.1	0.1	%
Fuel Moisture Loss	10.7	10.6	10.5	10.5	10.4	%
Casing Loss	0.3	0.4	0.6	1.2	3.0	%
Margin	1.0	1.0	1.0	1.0	1.0	%
Efficiency - LHV	93.1	93.5	93.8	93.1	91.1	%
Efficiency – HHV	83.9	84.3	84.5	84.0	82.1	%
Total Pressure Drop Including Economizer	6.61	3.63	1.58	0.46	0.09	IN WC
Products of Combustion - CO2	8.31	8.31	8.31	7.70	7.22	%
- H2O	18.20	18.20	18.20	17.01	16.08	%
-N2	71.03	71.03	71.03	71.50	71.86	%
-O2	2.46	2.46	2.46	3.79	4.84	%
-SO2	0.00001	0.00001	0.00001	0.00001	0.00001	%
GAS- % volume	**NG**					
methane	95.0	% vol.				
ethane	2.0	% vol.				
carbon dioxide	1.0	% vol.				
nitrogen	2.0	% vol.				
hydrogen sulfide	1.0E-4	% vol.				
LHV	20,202	btu/lb				
HHV	22,404	btu/lb				

**The above information is preliminary and shall be confirmed at time of engineering submittal.*

18.0 EXHIBIT 8: PERFORMANCE GUARANTEES

Cleaver-Brooks offers the following performance guarantees specific to this project:

PROCESS GUARANTEES (FIRING NATURAL GAS ONLY)	VALUE	UNIT
Maximum Continuous Rating (MCR) Steam Flow (at exit of non-return valve)	85,000	Lb/Hr
Operating Steam Pressure (at exit of non-return valve)	325	psig
Operating Steam Temperature (at exit of non-return valve at 100% MCR)	Saturated	°F
Boiler Feedwater Inlet Temperature	220°F	°F
Inlet Combustion Air Temperature	80	°F
Inlet Combustion Air Relative Humidity	60	%
Boiler Thermal Efficiency (Based on HHV and ASME PTC 4 Heat Loss Method)	83.9	%
Steam Purity (With ASME Quality Water per Attached)	99.5% dry steam	
Maximum Noise Rating (at 3 Ft in a free field)	85	dBA

BURNER EMISSIONS

Guaranteed Emissions		Natural Gas	Biogas
NO_x	lb/MMBTU	0.036	0.0336
CO	lb/MMBTU	0.04	0.08
SO_x (Not burner dependent)	lb/MMBTU	Negligible	0.036

Based on:
EA (excess air) and FGR rates are expected only and not guaranteed.
Please refer to boiler performance for guaranteed boiler efficiency.
From 25% to 100% MCR corrected to 3 $\%O_2$ on a dry basis.
CB technician is required for start-up and adjustments.
PM is exclusive of any particulates in combustion air or other sources of residual particulates from material.

We are offering the above guarantees. All other data contained in this proposal is predicted only and will be finalized at time of engineering submittal after receipt of award. Guarantees are based on the unit being operated per the requirements of the operation and maintenance manual.

If performance testing is required, it is the Buyer's responsibility to provide steam load (or steam vent to atmosphere) and have the equipment tested by a third party during the stated warranty period. If equipment passes such tests, or the tests are not performed before the end of the warranty period, it will be assumed that the equipment is accepted. The cost of all tests is the responsibility of the Buyer.

The operational turndown is as listed above. Emissions guarantees are separate and valid from 25-100% unless stated otherwise.

The addition of any of the priced options listed above may impact the design, performance, and/or schedule as listed in this proposal and Seller provided datasheets (if applicable).

Table 3
Main Line and Pre-Form Line Fryers
J.R. Simplot Rainier Plant
Moses Lake, Washington

Parameter	Value	
Operating hours	8,760	hours/year
Maximum Production	74	Mlb/hr
Exhaust Gas Volume	9,000	dscfm
Uncontrolled VOC Emission Factor [a]	0.27	lb/Mlb product
Uncontrolled $PM_{10}/PM_{2.5}$ Emission Factor [b]	25	lb/hr
WESP $PM_{10}/PM_{2.5}$ Emission Factor [c]	0.018	grain/dscf

Pollutant	Uncontrolled Fryer Emissions [a]		WESP Controlled Emissions [b]	
	Hourly (lb/hr)	Annual (tpy)	Hourly lb/hr	Annual tpy
PM_{10} (Filt. & Cond.)	25	110	1.4	6
$PM_{2.5}$ (Filt.& Cond.) [d]	25	110	1.4	6
VOC (as Propane)	20	88	20	88

Notes:

[a] Uncontrolled VOC emission factor based on Simplot 2017 source test at a potato plant.

[b] Uncontrolled fryer emissions from the main line and pre-form line fryers based on average of 3 past source tests for similar fryers at other Simplot plants.

[c] WESP particulate matter emission factor based on presumptive BACT from Ecology. Conservatively assume $PM_{2.5}$ emission rates are equivalent to PM_{10} emission rates.

[b] WESP exhaust emissions include Fryer Lines 1 and 2. Particulate matter emissions based on presumptive BACT and VOC emissions equal to uncontrolled fryer emissions.

Table 4
Line 1 Dryer - Main Line
J.R. Simplot Rainier Plant
Moses Lake, Washington

Parameters	Units
Operating Hours	8,760 hrs/yr
Product Throughput	60,500 lbs/hr

Pollutant	Emission Factor		Emission Rate	
			Hourly (lb/hr)	Annual (tpy)
Criteria Pollutant Emissions				
PM_{10}	0.0150 lb/Mlb	[a]	0.91	3.97
$PM_{2.5}$	0.0150 lb/Mlb	[a]	0.91	3.97
VOC	0.0088 lb/Mlb	[a]	0.53	2.3

Notes:

[a] PM emission factor from 2023 source test at Simplot potato plant. VOC emission factor from 2017 source testing at Simplot potato plant.

Table 5
Line 2 Dryer - Form Line
J.R. Simplot Rainier Plant
Moses Lake, Washington

Parameters	Units
Operating Hours	8,760 hrs/yr
Product Throughput	13,750 lbs/hr

Pollutant	Emission Factor	Emission Rate	
		Hourly (lb/hr)	Annual (tpy)
Criteria Pollutant Emissions			
PM_{10}	0.036 lb/Mlb [a]	0.5	2
$PM_{2.5}$	0.036 lb/Mlb [a]	0.5	2
VOC	0.073 lb/Mlb [a]	1.0	4

Notes:

[a] PM and VOC emission factors from 2017 source testing at Simplot potato plant.

Table 6
Diesel Fire Water Pump 1
J.R. Simplot Rainier Plant
Moses Lake, Washington

Parameter	Value		
Annual Operating Hours	100	hours/year	
Engine Rating	350	HP	
Fuel Consumption	16.1	gal/hr	a
Heat Input Capacity	2.2	MMBtu/hr	c

Pollutant	Emission Factor			Emission Rate	
				Hourly (lb/hr)	Annual (tpy)
Criteria Pollutant Emissions					
NO_X	2.64	g/HP-hr	a	2.0	0.10
CO	0.7	g/HP-hr	a	0.54	0.027
SO_2	0.0015	lb/MMBtu	b	0.0034	1.7E-04
PM_{10}	0.11	g/HP-hr	a	0.085	0.0042
$PM_{2.5}$	0.11	g/HP-hr	a	0.085	0.0042
VOC	0.09	g/HP-hr	a	0.07	0.010
Greenhouse Gas Emissions					
CO_2	163	lb/MMBtu	c	365	18
CH_4	6.6E-03	lb/MMBtu	c	0.015	7.4E-04
N_2O	1.3E-03	lb/MMBtu	c	0.0030	1.5E-04
CO_2e	164	lb/MMBtu	d	366	18
Toxic and Hazardous Air Pollutant Emissions					
1,3-Butadiene	1.59E-03	lb/MMBtu	g	3.6E-03	1.8E-04
Acetaldehyde	5.72E-03	lb/MMBtu	g	1.3E-02	6.4E-04
Acrolein	2.47E-04	lb/MMBtu	g	5.5E-04	2.8E-05
Ammonia	3.54E-02	lb/MMBtu	f	7.9E-02	4.0E-03
Arsenic	1.17E-05	lb/MMBtu	g	2.6E-05	1.3E-06
Benzene	1.36E-03	lb/MMBtu	g	3.0E-03	1.5E-04
Benzo(a)anthracene	7.90E-06	lb/MMBtu	f	1.8E-05	8.8E-07
Benzo[a]pyrene	6.43E-06	lb/MMBtu	f	1.4E-05	7.2E-07
Benzo[b]fluoranthene	1.28E-05	lb/MMBtu	h	2.9E-05	1.4E-06
Benzo[k]fluoranthene	1.26E-05	lb/MMBtu	h	2.8E-05	1.4E-06
Cadmium	1.09E-05	lb/MMBtu	g	2.4E-05	1.2E-06
Chlorobenzene	1.46E-06	lb/MMBtu	f	3.3E-06	1.6E-07
Chrysene	7.10E-06	lb/MMBtu	h	1.6E-05	7.9E-07
Copper	2.99E-05	lb/MMBtu	f	6.7E-05	3.3E-06
DEEP	0.110	g/HP-hr	e	8.5E-02	4.2E-03
Dibenz[a,h]anthracene	6.77E-06	lb/MMBtu	f	1.5E-05	7.6E-07
Ethyl benzene	7.95E-05	lb/MMBtu	g	1.8E-04	8.9E-06
Formaldehyde	1.26E-02	lb/MMBtu	g	2.8E-02	1.4E-03
Hexavalent chromium	7.30E-07	lb/MMBtu	f	1.6E-06	8.2E-08
Hydrogen chloride	1.36E-03	lb/MMBtu	g	3.0E-03	1.5E-04
Indeno[1,2,3-cd]pyrene	6.71E-06	lb/MMBtu	f	1.5E-05	7.5E-07
Lead	6.06E-05	lb/MMBtu	g	1.4E-04	6.8E-06
Manganese	2.26E-05	lb/MMBtu	f	5.1E-05	2.5E-06
Mercury	1.46E-05	lb/MMBtu	f	3.3E-05	1.6E-06

Table 6
Diesel Fire Water Pump 1
J.R. Simplot Rainier Plant
Moses Lake, Washington

Naphthalene	2.60E-04	lb/MMBtu [g]	5.8E-04	2.9E-05
n-Hexane	1.96E-04	lb/MMBtu [g]	4.4E-04	2.2E-05
Nickel	2.85E-05	lb/MMBtu [g]	6.4E-05	3.2E-06
Propylene	3.41E-03	lb/MMBtu [g]	7.6E-03	3.8E-04
Selenium	1.61E-05	lb/MMBtu [f]	3.6E-05	1.8E-06
Toluene	7.69E-04	lb/MMBtu [g]	1.7E-03	8.6E-05
Total chromium	4.38E-06	lb/MMBtu [f]	9.8E-06	4.9E-07
Xylenes, including m-, o-, p-xylene	3.09E-04	lb/MMBtu [g]	6.9E-04	3.5E-05
m-Xylene	1.58E-04	lb/MMBtu [f]	3.5E-04	1.8E-05
o-Xylene	1.52E-04	lb/MMBtu [f]	3.4E-04	1.7E-05
Total HAPs	2.47E-02	lb/MMBtu	5.5E-02	2.8E-03

Notes:

[a] Fuel consumption, NO_X, CO, VOC, and PM emission factors based on manufacturer specifications.

[b] SO_2 emission factor based on ULSD (15 ppm S) and AP-42 Section 3.4, Large Stationary Diesel Engines, Table 3.4-1 (fuel input).

[c] 40 CFR 98, Subpart C, Table C-1 and Table C-2.

[d] CO_2e calculated based on global warming potential for each greenhouse gas: CO_2 = 1; CH_4 = 25; and N_2O = 298 (40 CFR Part 98, Subpart A).

[e] Diesel Engine Exhaust Particulate (DEEP) emissions based on PM_{10} emissions.

[f] Emission factors based on CATEF for ICE, Diesel Mean values using the average of each unique Mean EF for each pollutant.

[g] Emission factors based on Ventura County Air Pollution Control District AB 2588 for Diesel Internal Combustion.

[h] Emissions factors based on AP-42 Chapter 3.3 - Gasoline and Diesel Industrial Engines.

Table 7
Emergency Generator
J.R. Simplot Rainier Plant
Moses Lake, Washington

Parameter	Value		
Annual Operating Hours	100	hours/year	
Engine Rating	237	HP	
Brake-Specific Fuel Consumption	7,000	Btu/hp-hr	a
Heat Input Capacity	1.7	MMBtu/hr	

Pollutant	Emission Factor			Emission Rate	
				Hourly (lb/hr)	Annual (tpy)
Criteria Pollutant Emissions					
NO_X	2.83	g/HP-hr	a	1.5	0.07
CO	0.89	g/HP-hr	a	0.47	0.023
SO_2	0.0015	lb/MMBtu	c	0.0025	1.3E-04
PM_{10}	0.089	g/HP-hr	a	0.047	0.0023
$PM_{2.5}$	0.089	g/HP-hr	a	0.047	0.0023
VOC	0.09	g/HP-hr	a	0.05	0.007
Greenhouse Gas Emissions					
CO_2	163	lb/MMBtu	c	271	14
CH_4	6.6E-03	lb/MMBtu	c	0.011	5.5E-04
N_2O	1.3E-03	lb/MMBtu	c	0.0022	1.1E-04
CO_2e	164	lb/MMBtu	d	271	14
Toxic and Hazardous Air Pollutant Emissions					
1,3-Butadiene	1.59E-03	lb/MMBtu	g	2.6E-03	1.3E-04
Acetaldehyde	5.72E-03	lb/MMBtu	g	9.5E-03	4.7E-04
Acrolein	2.47E-04	lb/MMBtu	g	4.1E-04	2.1E-05
Ammonia	3.54E-02	lb/MMBtu	f	5.9E-02	2.9E-03
Arsenic	1.17E-05	lb/MMBtu	g	1.9E-05	9.7E-07
Benzene	1.36E-03	lb/MMBtu	g	2.3E-03	1.1E-04
Benzo(a)anthracene	7.90E-06	lb/MMBtu	f	1.3E-05	6.6E-07
Benzo[a]pyrene	6.43E-06	lb/MMBtu	f	1.1E-05	5.3E-07
Benzo[b]fluoranthene	1.28E-05	lb/MMBtu	h	2.1E-05	1.1E-06
Benzo[k]fluoranthene	1.26E-05	lb/MMBtu	h	2.1E-05	1.0E-06
Cadmium	1.09E-05	lb/MMBtu	g	1.8E-05	9.1E-07
Chlorobenzene	1.46E-06	lb/MMBtu	f	2.4E-06	1.2E-07
Chrysene	7.10E-06	lb/MMBtu	h	1.2E-05	5.9E-07
Copper	2.99E-05	lb/MMBtu	f	5.0E-05	2.5E-06
DEEP	0.089	g/HP-hr	e	4.7E-02	2.3E-03
Dibenz[a,h]anthracene	6.77E-06	lb/MMBtu	f	1.1E-05	5.6E-07
Ethyl benzene	7.95E-05	lb/MMBtu	g	1.3E-04	6.6E-06
Formaldehyde	1.26E-02	lb/MMBtu	g	2.1E-02	1.0E-03
Hexavalent chromium	7.30E-07	lb/MMBtu	f	1.2E-06	6.1E-08
Hydrogen chloride	1.36E-03	lb/MMBtu	g	2.3E-03	1.1E-04
Indeno[1,2,3-cd]pyrene	6.71E-06	lb/MMBtu	f	1.1E-05	5.6E-07
Lead	6.06E-05	lb/MMBtu	g	1.0E-04	5.0E-06
Manganese	2.26E-05	lb/MMBtu	f	3.8E-05	1.9E-06
Mercury	1.46E-05	lb/MMBtu	f	2.4E-05	1.2E-06

Table 7
Emergency Generator
J.R. Simplot Rainier Plant
Moses Lake, Washington

Naphthalene	2.60E-04 lb/MMBtu	[g]	4.3E-04	2.2E-05
n-Hexane	1.96E-04 lb/MMBtu	[g]	3.3E-04	1.6E-05
Nickel	2.85E-05 lb/MMBtu	[g]	4.7E-05	2.4E-06
Propylene	3.41E-03 lb/MMBtu	[g]	5.7E-03	2.8E-04
Selenium	1.61E-05 lb/MMBtu	[f]	2.7E-05	1.3E-06
Toluene	7.69E-04 lb/MMBtu	[g]	1.3E-03	6.4E-05
Total chromium	4.38E-06 lb/MMBtu	[f]	7.3E-06	3.6E-07
Xylenes, including m-, o-, p-xylene	3.09E-04 lb/MMBtu	[g]	5.1E-04	2.6E-05
m-Xylene	1.58E-04 lb/MMBtu	[f]	2.6E-04	1.3E-05
o-Xylene	1.52E-04 lb/MMBtu	[f]	2.5E-04	1.3E-05
Total HAPs	2.47E-02 lb/MMBtu		4.1E-02	2.0E-03

Notes:

[a] NO_X, CO, VOC, and PM emission factors based on manufacturer specifications.

[b] SO_2 emission factor based on ULSD (15 ppm S) and AP-42 Section 3.4, Large Stationary Diesel Engines, Table 3.4-1 (fuel input).

[c] 40 CFR 98, Subpart C, Table C-1 and Table C-2.

[d] CO_2e calculated based on global warming potential for each greenhouse gas: CO_2 = 1; CH_4 = 25; and N_2O = 298 (40 CFR Part 98, Subpart A).

[e] Diesel Engine Exhaust Particulate (DEEP) emissions based on PM_{10} emissions.

[f] Emission factors based on CATEF for ICE, Diesel Mean values using the average of each unique Mean EF for

[g] Emission factors based on Ventura County Air Pollution Control District AB 2588 for Diesel Internal Combustion.

[h] Emissions factors based on AP-42 Chapter 3.3 - Gasoline and Diesel Industrial Engines.

Table 8
Fugitive Dust from Paved Roadways
J.R. Simplot Rainier Plant
Moses Lake, Washington

Source type	Road	Class	Vehicle Trips		Miles per Trip	VMT per Year	[W] (tons)	Emission Factors [E] (lbs/VMT)			Daily Controlled Emissions (lb/day)			Annual Controlled Emissions (tpy)		
			Daily	Annually				PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
Delivery Trucks -	Paved	Loaded	70	25,550	0.44	11,242	40	0.48	0.10	0.024	3.7	0.75	0.18	0.68	0.14	0.033
Truck Entrance Road	Paved	Empty	70	25,550	0.44	11,242	15	0.18	0.036	0.009	1.4	0.27	0.067	0.25	0.050	0.012
Product Trucks -	Paved	Loaded	90	32,850	0.44	14,454	40	0.48	0.10	0.024	4.8	0.96	0.236	0.88	0.175	0.043
Freezer Road	Paved	Empty	55	20,075	0.44	8,833	17.5	0.21	0.042	0.010	1.26	0.252	0.062	0.230	0.046	0.0113
Personal Vehicles	Paved	Loaded	196	71,540	0.52	37,201	2.5	0.029	0.006	0.0014	0.73	0.146	0.036	0.133	0.027	0.0065
										Total	**11.9**	**2.4**	**0.58**	**2.2**	**0.43**	**0.107**

Paved Road Emission Factor

The emission factors for vehicle traffic on paved roads at industrial sites were derived from AP-42, "Paved Roads", Section 13.2.1, January 2011.

Equation 2: $E=k*(sL)^{0.91}*(W)^{1.02}*[1-P/(4*365)]$

where:

E = emission factor (lb/VMT)

	PM	PM_{10}	$PM_{2.5}$	
k =	0.011	0.0022	0.00054	particle size multiplier

sL = 1.1 road surface silt content (g/m^2)[a]

W = average vehicle weight (tons)

P = 90 number of "wet" days with at least 0.254 mm (0.01 in) of precipitation[b]

CE = 75 control efficiency (%)[c]

Notes:

[a] Average of corn millsrom from AP-42 Table 13.2.1-3, "Typical Silt Content and Loading Values for Paved Roads at Industrial Facilities", January 2011.

[b] From AP-42 Figure 13.2.1-2 "Mean number of days with 0.01 inch or more of precipitation in the United States", January 2011.

[c] Reduction for sweeping paved areas from Reasonably Available Control Measures for Fugitive Dust Sources Table 2.1.1-3, Sept. 1980.

Table 9
Production Building Air Handling Units
J.R. Simplot Rainier Plant
Moses Lake, Washington

Parameter	Value
Operating hours	8,760 hours/year
Heat Input Capacity (HHV)	52 MMBtu/hr

Pollutant	Natural Gas Emission Factor		Emission Rate Hourly (lb/hr)	Emission Rate Annual (tpy)
Criteria Pollutant Emissions				
NO_x	0.098 lb/MMBtu	[a]	5.0	22.1
CO	0.082 lb/MMBtu	[a]	4.2	18.6
SO_2	5.9E-04 lb/MMBtu	[a]	0.03	0.13
PM_{10} (Filt. & Cond.)	0.0075 lb/MMBtu	[a]	0.38	1.7
$PM_{2.5}$ (Filt.& Cond.)	0.0075 lb/MMBtu	[a]	0.38	1.7
VOC	0.0054 lb/MMBtu	[a]	0.28	1.2
Lead	4.9E-07 lb/MMBtu	[a]	2.5E-05	1.1E-04
Greenhouse Gas Emissions				
CO_2	117 lb/MMBtu	[b]	6,021	26,372
CH_4	2.2E-03 lb/MMBtu	[b]	0.11	0.5
N_2O	2.2E-04 lb/MMBtu	[b]	0.011	0.05
CO_2e	117 lb/MMBtu	[c]	6,027	26,399
Toxic and Hazardous Air Pollutant Emissions				
Acetaldehyde	3.1E-03 lb/MMscf	[d]	1.6E-04	6.9E-04
Acrolein	2.7E-03 lb/MMscf	[d]	1.4E-04	6.0E-04
Arsenic	2.0E-04 lb/MMscf	[a]	1.0E-05	4.4E-05
Benzene	5.8E-03 lb/MMscf	[d]	2.9E-04	1.3E-03
Beryllium	1.2E-05 lb/MMscf	[a]	6.1E-07	2.7E-06
Cadmium	1.1E-03 lb/MMscf	[a]	5.6E-05	2.4E-04
Chromium(total)	1.4E-03 lb/MMscf	[a]	7.1E-05	3.1E-04
Cobalt	8.4E-05 lb/MMscf	[a]	4.2E-06	1.9E-05
Copper	8.5E-04 lb/MMscf	[a]	4.3E-05	1.9E-04
Ethylbenzene	6.9E-03 lb/MMscf	[d]	3.5E-04	1.5E-03
Formaldehyde	7.5E-02 lb/MMscf	[a]	3.8E-03	1.7E-02
Hexane	1.8E+00 lb/MMscf	[a]	9.1E-02	4.0E-01
Manganese	3.8E-04 lb/MMscf	[a]	1.9E-05	8.4E-05
Mercury	2.6E-04 lb/MMscf	[a]	1.3E-05	5.8E-05
Nickel	2.1E-03 lb/MMscf	[a]	1.1E-04	4.6E-04
PAH's (including Naphthalene)	4.0E-04 lb/MMscf	[d]	2.0E-05	8.8E-05
Polycyclic Organic Matter				
2-Methylnaphthalene	2.4E-05 lb/MMscf	[a]	1.2E-06	5.3E-06
3-Methylchloranthrene	1.8E-06 lb/MMscf	[a]	9.1E-08	4.0E-07
7,12-Dimethylbenz(a)anthracene	1.6E-05 lb/MMscf	[a]	8.1E-07	3.5E-06
Acenaphthene	1.8E-06 lb/MMscf	[a]	9.1E-08	4.0E-07
Acenaphthylene	1.8E-06 lb/MMscf	[e]	9.1E-08	4.0E-07
Anthracene	2.4E-06 lb/MMscf	[a]	1.2E-07	5.3E-07
Benz(a)anthracene	1.8E-06 lb/MMscf	[a]	9.1E-08	4.0E-07
Benzo(a)pyrene	1.2E-06 lb/MMscf	[a]	6.1E-08	2.7E-07
Benzo(b)fluoranthene	1.8E-06 lb/MMscf	[a]	9.1E-08	4.0E-07

Table 9
Production Building Air Handling Units
J.R. Simplot Rainier Plant
Moses Lake, Washington

Benzo(g,h,i)perylene	1.2E-06 lb/MMscf	[a]	6.1E-08	2.7E-07
Benzo(k)fluoranthene	1.8E-06 lb/MMscf	[a]	9.1E-08	4.0E-07
Chrysene	1.8E-06 lb/MMscf	[a]	9.1E-08	4.0E-07
Dibenzo(a,h)anthracene	1.2E-06 lb/MMscf	[a]	6.1E-08	2.7E-07
Dichlorobenzene	1.2E-03 lb/MMscf	[a]	6.1E-05	2.7E-04
Fluoranthene	3.0E-06 lb/MMscf	[a]	1.5E-07	6.6E-07
Fluorene	2.8E-06 lb/MMscf	[a]	1.4E-07	6.2E-07
Indeno(1,2,3-cd)pyrene	1.8E-06 lb/MMscf	[a]	9.1E-08	4.0E-07
Naphthalene	6.1E-04 lb/MMscf	[a]	3.1E-05	1.3E-04
Phenanathrene	1.7E-05 lb/MMscf	[e]	8.6E-07	3.8E-06
Pyrene	5.0E-06 lb/MMscf	[a]	2.5E-07	1.1E-06
Propylene	5.3E-01 lb/MMscf	[d]	2.7E-02	1.2E-01
Selenium	2.4E-05 lb/MMscf	[a]	1.2E-06	5.3E-06
Toluene	2.7E-02 lb/MMscf	[d]	1.3E-03	5.9E-03
Vanadium	2.3E-03 lb/MMscf	[a]	1.2E-04	5.1E-04
Xylenes	2.0E-02 lb/MMscf	[d]	9.9E-04	4.4E-03
Total HAPs	1.9E+00 lb/MMscf		9.8E-02	4.3E-01

Notes:

[a] Natural gas emission factors based on AP-42, Section 1.4 (Natural Gas Combustion) calculated as lb/MMBtu using natural gas heat content (1,020 btu/cf).

[b] Greenhouse gas emission factors from 40 CFR 98, Subpart C, Table C-1 and Table C-2.

[c] CO_2e calculated based on global warming potential for each greenhouse gas: CO_2 = 1; CH_4 = 25; and N_2O = 298 (40 CFR Part 98, Subpart A).

[d] Emission Factors from Ventura County Air Pollution Control District AB2588 for natural gas fired boilers rated <10 MMBTU/hr. Factors corrected to lb/mmBtu using natural gas heat content (1,020 btu/cf).

[e] Emission Factors from EPA WebFIRE emissions factor search. Factors corrected to lb/mmBtu using natural gas heat content (1,020 btu/cf).

Table 10
High Bay Freezer Building Air Handling Units
J.R. Simplot Rainier Plant
Moses Lake, Washington

Parameter	Value
Operating hours	8,760 hours/year
Heat Input Capacity (HHV)	0.93 MMBtu/hr

Pollutant	Natural Gas Emission Factor		Emission Rate Hourly (lb/hr)	Emission Rate Annual (tpy)
Criteria Pollutant Emissions				
NO_x	0.098 lb/MMBtu	[a]	0.1	0.4
CO	0.082 lb/MMBtu	[a]	0.1	0.3
SO_2	5.9E-04 lb/MMBtu	[a]	0.00	0.00
PM_{10} (Filt. & Cond.)	0.0075 lb/MMBtu	[a]	0.01	0.0
$PM_{2.5}$ (Filt.& Cond.)	0.0075 lb/MMBtu	[a]	0.01	0.0
VOC	0.0054 lb/MMBtu	[a]	0.01	0.0
Lead	4.9E-07 lb/MMBtu	[a]	4.6E-07	2.0E-06
Greenhouse Gas Emissions				
CO_2	117 lb/MMBtu	[b]	109	478
CH_4	2.2E-03 lb/MMBtu	[b]	0.00	0.0
N_2O	2.2E-04 lb/MMBtu	[b]	0.000	0.00
CO_2e	117 lb/MMBtu	[c]	109	479
Toxic and Hazardous Air Pollutant Emissions				
Acetaldehyde	4.3E-03 lb/MMscf	[d]	3.9E-06	1.7E-05
Acrolein	2.7E-03 lb/MMscf	[d]	2.5E-06	1.1E-05
Arsenic	2.0E-04 lb/MMscf	[a]	1.8E-07	8.0E-07
Benzene	8.0E-03 lb/MMscf	[d]	7.3E-06	3.2E-05
Beryllium	1.2E-05 lb/MMscf	[a]	1.1E-08	4.8E-08
Cadmium	1.1E-03 lb/MMscf	[a]	1.0E-06	4.4E-06
Chromium(total)	1.4E-03 lb/MMscf	[a]	1.3E-06	5.6E-06
Cobalt	8.4E-05 lb/MMscf	[a]	7.7E-08	3.4E-07
Copper	8.5E-04 lb/MMscf	[a]	7.8E-07	3.4E-06
Ethylbenzene	9.5E-03 lb/MMscf	[d]	8.7E-06	3.8E-05
Formaldehyde	7.5E-02 lb/MMscf	[a]	6.9E-05	3.0E-04
Hexane	1.8E+00 lb/MMscf	[a]	1.6E-03	7.2E-03
Manganese	3.8E-04 lb/MMscf	[a]	3.5E-07	1.5E-06
Mercury	2.6E-04 lb/MMscf	[a]	2.4E-07	1.0E-06
Nickel	2.1E-03 lb/MMscf	[a]	1.9E-06	8.4E-06
PAH's (including Naphthalene)	4.0E-04 lb/MMscf	[d]	3.7E-07	1.6E-06
Polycyclic Organic Matter				
2-Methylnaphthalene	2.4E-05 lb/MMscf	[a]	2.2E-08	9.6E-08
3-Methylchloranthrene	1.8E-06 lb/MMscf	[a]	1.6E-09	7.2E-09
7,12-Dimethylbenz(a)anthracene	1.6E-05 lb/MMscf	[a]	1.5E-08	6.4E-08
Acenaphthene	1.8E-06 lb/MMscf	[a]	1.6E-09	7.2E-09
Acenaphthylene	1.8E-06 lb/MMscf	[e]	1.6E-09	7.2E-09
Anthracene	2.4E-06 lb/MMscf	[a]	2.2E-09	9.6E-09
Benz(a)anthracene	1.8E-06 lb/MMscf	[a]	1.6E-09	7.2E-09
Benzo(a)pyrene	1.2E-06 lb/MMscf	[a]	1.1E-09	4.8E-09
Benzo(b)fluoranthene	1.8E-06 lb/MMscf	[a]	1.6E-09	7.2E-09

Table 10
High Bay Freezer Building Air Handling Units
J.R. Simplot Rainier Plant
Moses Lake, Washington

Benzo(g,h,i)perylene	1.2E-06 lb/MMscf	[a]	1.1E-09	4.8E-09
Benzo(k)fluoranthene	1.8E-06 lb/MMscf	[a]	1.6E-09	7.2E-09
Chrysene	1.8E-06 lb/MMscf	[a]	1.6E-09	7.2E-09
Dibenzo(a,h)anthracene	1.2E-06 lb/MMscf	[a]	1.1E-09	4.8E-09
Dichlorobenzene	1.2E-03 lb/MMscf	[a]	1.1E-06	4.8E-06
Fluoranthene	3.0E-06 lb/MMscf	[a]	2.7E-09	1.2E-08
Fluorene	2.8E-06 lb/MMscf	[a]	2.6E-09	1.1E-08
Indeno(1,2,3-cd)pyrene	1.8E-06 lb/MMscf	[a]	1.6E-09	7.2E-09
Naphthalene	6.1E-04 lb/MMscf	[a]	5.6E-07	2.4E-06
Phenanathrene	1.7E-05 lb/MMscf	[e]	1.6E-08	6.8E-08
Pyrene	5.0E-06 lb/MMscf	[a]	4.6E-09	2.0E-08
Propylene	7.3E-01 lb/MMscf	[d]	6.7E-04	2.9E-03
Selenium	2.4E-05 lb/MMscf	[a]	2.2E-08	9.6E-08
Toluene	3.7E-02 lb/MMscf	[d]	3.4E-05	1.5E-04
Vanadium	2.3E-03 lb/MMscf	[a]	2.1E-06	9.2E-06
Xylenes	2.7E-02 lb/MMscf	[d]	2.5E-05	1.1E-04
Total HAPs	2.0E+00 lb/MMscf		1.8E-03	7.9E-03

Notes:

[a] Natural gas emission factors based on AP-42, Section 1.4 (Natural Gas Combustion) calculated as lb/MMBtu using natural gas heat content (1,020 btu/cf).

[b] Greenhouse gas emission factors from 40 CFR 98, Subpart C, Table C-1.

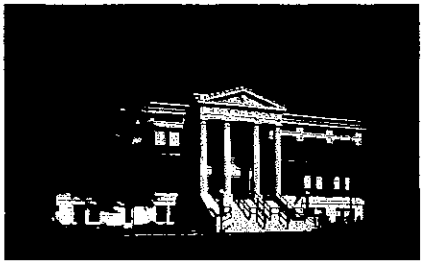
[c] CO_2e calculated based on global warming potential for each greenhouse gas: CO_2 = 1; CH_4 = 25; and N_2O = 298 (40 CFR Part 98, Subpart A).

[d] Emission Factors from Ventura County Air Pollution Control District AB2588 for natural gas fired boilers rated <10 MMBTU/hr. Factors corrected to lb/mmBtu using natural gas heat content (1,020 btu/cf).

[e] Emission Factors from EPA WebFIRE emissions factor search. Factors corrected to lb/mmBtu using natural gas heat content (1,020 btu/cf).

APPENDIX D

Mitigated Determination of Non-Significance



GRANT COUNTY
DEVELOPMENT SERVICES
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(509) 754-2011 EXT 2501

August 3, 2022

TO:
Grant County Fire Marshal (via email)
Grant County Building Official (via email)
Grant County Treasurer's Office (via email)
Grant County Health District (via email)
Grant County Public Works Department (via email)
Grant County Assessor's Office (via email)
Grant County P.U.D. (via email)
U.S. Bureau of Reclamation (via email)
WA State Department of Ecology (Olympia) (via email)
WA State Dept. of Fish and Wildlife (via email)
WA State Department of Transportation (via email)
WA State Department of Archaeology & Historic Preservation (via email)
Colville Confederated Tribes (via email)
East Columbia Basin Irrigation District (via email)
Grant County Fire District #5 (via email)
City of Moses Lake (via email)
Port of Moses Lake (via email)
Columbia Basin Railroad Company (via email)

FROM:
Ron Sell, Associate Planner
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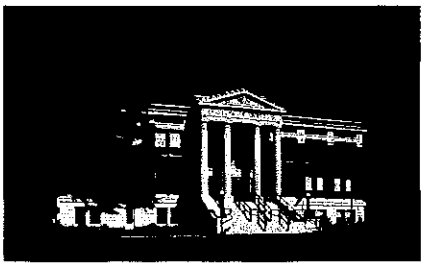
rpsell@grantcountywa.gov

RE:
JR Simplot Company
SEPA (P 22-0261) Application
Parcel #18-0218-000 & 18-0217-000

Enclosed is a copy of the Mitigated Determination of Non-Significance issued by Grant County. **Please submit any comments on this MDNS no later than 5 pm on August 18, 2022** to Ron Sell at Grant County Development Services at the above address. Thank you.



GRANT COUNTY
DEVELOPMENT SERVICES
P.O. BOX 37 - 264 WEST DIVISION AVENUE
EPHRATA, WA 98823
(509) 754-2011 EXT. 2501

MITIGATED DETERMINATION of NON-SIGNIFICANCE

Proposal: SEPA Application File No. P 22-0261

Description of Proposal: A SEPA review, a variance to the 35-foot height limit to allow a building height of 150 feet and a Discretionary Use Permit to allow an Agricultural-Related Industrial Use which will include the extension of a rail spur, food processing plant, cold storage, warehouses, parking, staging areas, circulation areas and emergency internal combustion engines for emergency power and fire water pump in the Agricultural Zoning District of Grant County.

Proponent: Vic Conrad, Director of Land, Water & Asset Recovery
JR Simplot Company
PO Box 27
Boise, ID 83707

Contact: T-O Engineers
Vince Barthels
1717 S. Rustle Street, Suite 201
Spokane, WA 99224

Location of Proposal: The subject site is located at 2107 Road O NE, Moses Lake, WA 98837. The subject parcels are located in the South half and the Northwest quarter of Section 22, Township 19 North, Range 29 East, WM, Grant County, WA (Parcel #18-0218-000 and 18-0217-000).

Lead Agency: Grant County Development Services
P.O. Box 37
Ephrata, WA 98823

The lead agency for SEPA review has determined that this project will not have probable significant adverse impacts on the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030 (2) (c). The decision was made after review of a complete environmental checklist and other information on file with the lead agency. This information is available to the public upon request.

___ There is no comment period for this MDNS pursuant to WAC 197-11-355 Optional DNS process.

___ There is no comment period for this MDNS.

_X_ This MDNS is issued under 197-11-340(2). The lead agency will not act on this proposal for 14 days from the date of this decision; there is a subsequent 14-day appeal period which immediately follow the close of the comment period as provided by GCC 24.04.220 and WAC 197-11-680.

Findings:

The application for this proposal was deemed to be Technically Complete on July 12, 2022. The proposal is a project action under SEPA. The project site was previously reviewed for environmental concerns and a Mitigated Determination of Non-Significance was issued on May 10, 2021. This proposal shall meet the same conditions of approval as were required of the previous threshold determination. This proposal is not located within an Urban Growth Area in Grant County. The zoning for the site is Agricultural. The Comprehensive Plan Land Use designation for the site is Irrigated Agricultural. The project was reviewed for compliance with Chapter 24.08 "Critical Areas and Cultural Resources" of the Grant County Unified Development and according to the Grant County Critical Areas maps, there were identified Priority Habitat and Species occurrences designated within 300 feet of the boundary of the projects. A Habitat Management Plan was prepared for this proposal including mitigation measures. Subject to compliance with the mitigation measures there should be no significant impact to these PHS areas. The project site also has wetland areas present as indicated in the National Wetland Inventory mapping. A Wetland Delineation and Wetland report was prepared for this property with appropriate buffers and compensatory mitigation provided.

Mitigation Measures:

1. The landowners/applicants are responsible to determine if any other permits and/or licenses will be required by other local, state, and federal agencies. The landowners/applicants shall acquire all such permits and/or licenses as required.

2. The applicant shall comply with all mitigation measures as provided in the Habitat Management Plan for both Wetlands and Priority Habitat and Species occurrences on the property as provided in said Habitat Management Plan prepared by Vince Barthels, Biologist, of T-O Engineers dated January 2021.

3. Best Management Practices (BMPs) shall be utilized as necessary during development and implementation of this proposal in order to minimize temporary disturbances to the subject area, to lessen the risk of erosion, and to stabilize the site during construction. Proper erosion and sediment control practices must be used to prevent upland sediments from entering surface water. Dust and emissions to the air will be controlled by using water on-site for dust control as needed.

4. The proposed development shall not inflict upon adjacent land(s) smoke, dust, glare, dirt, steam, vibration, noise, electrical interference, excessive hazards, odors, or pollution which exceeds applicable local, state, or federal standards.

5. The applicant shall obtain a Construction Stormwater General Permit.

6. During the grading activities contemplated in the grading permit associated with this Environmental Checklist, the developer shall follow the protocol for Inadvertent Discoveries for cultural resources.

7. Watering of the site will occur as necessary during the construction phase of the project to control dust and other particulates.

8. State regulations regarding safe handling of hazardous materials, if stored, used, found, or produced will be enforced during the construction process.

9. Construction activities will be limited to hours as specified by Grant County which will mitigate the impacts of potential construction noise.

10. Stormwater facilities will be designed to meet guidelines from the DOE Stormwater Management Manual for Eastern Washington, or Washington State Department of Transportation (WSDOD Stormwater Runoff Manual as appropriate. Stormwater ponds should not be closer than 25' to the established wetland boundary.

11. Staging areas and all excavation and embankment placement areas would occur only within the outlined limits of the defined proposed project action area. Staging areas shall be located greater than 25' from the delineated wetland boundary.

12. Contractors will always have emergency spill equipment onsite and must have a Spill Prevention Plan approved and in place prior to any construction activities. The Contractor should check equipment daily for leaks and shall fix any detected leaks.

13. Temporary erosion controls (TECs) (i.e. silt fences, silt curtains, straw bales, or wattles) will be implemented according to the final construction designs. The proposed project will include regular onsite observation of work and TECs. Any deficiencies in TECs shall be addressed immediately.

14. Post-construction reseeding with the recommended seed and the prescribed native plantings used in the restoration effort should provide adequate re-vegetation, erosion control, and address any temporal construction impacts immediately outside the development footprint. A proposed planting schedule is in Table 3, found in the Wetland Mitigation Plan section of this document.

15. Hydroseeding would be implemented in the project footprint to provide specific vegetative recruitment opportunities and provide erosion control protection to newly disturbed areas. The utilized seed mix should include native grass seeds and at least one quick-establishing annual plant species.

16. Noxious weed management shall be exercised in all areas where ground disturbing activities take place.

17. Any demolition waste created during site preparation and grading activities shall be disposed of at a permitted solid waste facility.

18. Applicant shall submit a Notice of Intent to Ecology for a Construction Stormwater General Permit and will develop a Stormwater Pollution Prevention Plan to supplement the Construction Stormwater General Permit.

19. The building classification will be 'unlimited' and shall require a fire sprinkler system.

20. The applicant shall comply with all recommended mitigation measures as provided in the 'Simplot Industrial Traffic Impact Analysis' as provided in said Traffic study prepared by Caitlin Trimble, Alex Jondal and Larry Frostad, of T-O Engineers dated July 7, 2022.

*****

Responsible Official: Christopher Young, Director
Grant County Development Services
P.O. Box 37, Ephrata, WA 98823
(509) 754-2011 Ext. 2501

Signature: _____ **Date**: August 3, 2022
Christopher Young, Director

Appeals: This determination may be appealed by written notice of appeal filed with the County pursuant to the requirements of the Grant County Unified Development Code, State RCWs and WACs. An appeal of this decision must be filed no later than 14 days after the close of the comment period for this determination.

Date: July 18, 2022

Please return this Comment Sheet by 5:00 pm on: August 2, 2022

From:	Type of Permit:	
Kent Ziemer, Associate Planner Grant County Development Services 264 West Division Avenue - PO Box 37 Ephrata, WA 98823 (509)754-2011, ext. 2538 kziemer@grantcountywa.gov	Zone Change:	
	Conditional Use Permit:	
	Variance:	XXX
	Discretionary Use:	XXX
	Short Plat:	
	Other:	

Designated Contact: Vince Barthels
1717 S. Rustle Street
Spokane, WA 99224

Applicant/Property Owner: Vic Conrad, Director of Land, Water & Asset Recovery
JR Simplot Company
PO Box 27
Boise, ID 83707

Project Number: Variance Application #P 22-0262, Discretionary Use Permit #P22-0260 and SEPA Checklist Application #P22-0261

Description of Proposal: A SEPA review, a variance to the 35-foot height limit to allow a building height of 150 feet and a Discretionary Use Permit to allow an Agricultural-Related Industrial Use which will include the extension of a rail spur, food processing plant, cold storage, warehouses, parking, staging areas, circulation areas and emergency internal combustion engines for emergency power and fire water pump in the Agricultural Zoning District of Grant County.

Location of Proposal: The site address of the subject parcel is 2107 Road O NE, Moses Lake, WA 98837. The subject parcels are located in the South half and the Northwest quarter of Section 22, Township 19 North, Range 29 East, WM, Grant County, WA (Parcel #18-0218-000 and 18-0217-000).

Comments &/or Requirements

See attached sheet for comments.

Print Name: _____ **Date:** 8/2/22

Sign Name: [signature] **Agency Name:** GCPW

GRANT COUNTY
WASHINGTON

Simplot Industrial Discretionary Use & Variance Public Works Comments

1. Public Works agrees with the traffic impact analysis as far as road capacity, however, we have safety concerns of the geometry of the surrounding intersections.
    a. Frontage improvements will be required as per the traffic impact analysis.
    b. A reduction of the speed limit to forty-five (45) miles per hour along Road 3 NE from milepost 3.88 to milepost 5.03 may be required for this development based upon an engineering review.
2. Approach permits shall be acquired for all existing approaches and all proposed approaches to the County road prior to obtaining a building permit.
3. All approaches shall meet the Grant County Approach requirements.

Project No.	**P 22-0190**	Checked by:	KIB	Reviewed by:	8/2/22
Sign Name:	Katherine Bu			Date:	8/2/22

Date:	July 18, 2022	Please return this Comment Sheet by 5:00 pm on:	August 2, 2022

From:	Type of Permit:	
Kent Ziemer, Associate Planner Grant County Development Services 264 West Division Avenue - PO Box 37 Ephrata, WA 98823 (509)754-2011, ext. 2538 kziemer@grantcountywa.gov	Zone Change:	
	Conditional Use Permit:	
	Variance:	XXX
	Discretionary Use:	XXX
	Short Plat:	
	Other:	

Designated Contact: Vince Barthels
1717 S. Rustle Street
Spokane, WA 99224

Applicant/Property Owner: Vic Conrad, Director of Land, Water & Asset Recovery
JR Simplot Company
PO Box 27
Boise, ID 83707

Project Number: Variance Application #P 22-0262, Discretionary Use Permit #P22-0260 and SEPA Checklist Application #P22-0261

Description of Proposal: A SEPA review, a variance to the 35-foot height limit to allow a building height of 150 feet and a Discretionary Use Permit to allow an Agricultural-Related Industrial Use which will include the extension of a rail spur, food processing plant, cold storage, warehouses, parking, staging areas, circulation areas and emergency internal combustion engines for emergency power and fire water pump in the Agricultural Zoning District of Grant County.

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Comments &/or Requirements:

Owner is JR Simplot Co. No Issues

Print Name:	Matthew Hope	**Date:**	8/2/22
Sign Name:		**Agency Name:**	Assessor's Office

Ron P. Sell

From: Kim Yeager <kyeager@ihdllc.com>
Sent: Thursday, July 28, 2022 10:17 AM
To: Ron P. Sell
Subject: RE: RJ Simplot, Variance, Discretionary Use Permit and SEPA Checklist for a Agriculture Industrial Facility - P 22-0262, P 22-0261 and P 22-0260 - Grant County Planning

[redacted]

Ron,

Columbia Basin Railroad Company Inc. (CBRR) is in full support of the project. The turnout location is ideal for CBRR rail service/operations. We have been in communication with JR Simplot in regards to rail development, of which they will follow all AREMA/BNSF (CBRR) Industry Track standards.

Thanks again for sharing this additional information – appreciate it.

All future land use proposals that are adjacent to rail right-of-way and/or involve rail please be sure to include our offices:

Columbia Basin Railroad Company, Inc.
c/o Iron Horse Real Estate & Property Mgt.
111 University Parkway, Suite 200
Yakima WA 98901
tmarshall@cbrr.com Tim Marshall – General Manager
kyeager@ihdllc.com Kim Yeager – Real Estate Manager

Thanks so much,
Kim

Kim Yeager
Real Estate Manager/Designated Broker

Iron Horse Real Estate

Railroad Property Management & Land Management
Columbia Basin Railroad – Central Washington Railroad

111 University Parkway| Suite 200| Yakima, WA 98901|
|P 509.834.2533 | |C 509.388.6602| |F 509.453.9349|
kyeager@ihdllc.com

From: Ron P. Sell <rpsell@grantcountywa.gov>
Sent: Thursday, July 21, 2022 3:05 PM
To: Kim Yeager <kyeager@ihdllc.com>

Date: July 18, 2022	**Please return this Comment Sheet by 5:00 pm on:** August 2, 2022

From:	Type of Permit:	
Kent Ziemer, Associate Planner Grant County Development Services 264 West Division Avenue - PO Box 37 Ephrata, WA 98823 (509)754-2011, ext. 2538 kziemer@grantcountywa.gov	Zone Change:	
	Conditional Use Permit:	
	Variance:	**XXX**
	Discretionary Use:	**XXX**
	Short Plat:	
	Other:	

Designated Contact: Vince Barthels
1717 S. Rustle Street
Spokane, WA 99224

Applicant/Property Owner: Vic Conrad, Director of Land, Water & Asset Recovery
JR Simplot Company
PO Box 27
Boise, ID 83707

Project Number: Variance Application #P 22-0262, Discretionary Use Permit #P22-0260 and SEPA Checklist Application #P22-0261

Description of Proposal: A SEPA review, a variance to the 35-foot height limit to allow a building height of 150 feet and a Discretionary Use Permit to allow an Agricultural-Related Industrial Use which will include the extension of a rail spur, food processing plant, cold storage, warehouses, parking, staging areas, circulation areas and emergency internal combustion engines for emergency power and fire water pump in the Agricultural Zoning District of Grant County.

Location of Proposal: The site address of the subject parcel is 2107 Road O NE, Moses Lake, WA 98837. The subject parcels are located in the South half and the Northwest quarter of Section 22, Township 19 North, Range 29 East, WM, Grant County, WA (Parcel #18-0218-000 and 18-0217-000).

Comments &/or Requirements: SPECIAL INDUSTRIAL OCCUPANCIES ARE NOT CONSIDERED High Rise BLDGS ONCE they EXCEED 75 FEET SO NO ISSUE WITH the PROPOSED HEIGHT. NO PROPOSED Site PLAN SO WE CANNOT COMMENT FURTHER.

Print Name:	Chris Young	**Date:**	7/21/22
Sign Name:	Chris Young	**Agency Name:**	BLDG. DIVISION

Ron P. Sell

From: Christopher Young
Sent: Thursday, July 21, 2022 3:00 PM
To: Ron P. Sell
Subject: RE: JR Simplot Site Plan

Holy moly that's a biggin! I would assume they will realize it will be an unlimited building and require a fire sprinkler system.

Thanks -

GRANT COUNTY

Chris Young
Director/Building Official
Grant Co Development Services
Phone: 509-754-2011 (3019)
Email: cyoung@grantcountywa.gov

Mailing: PO Box 37
Ephrata WA 98823
Physical: 264 W Division Ave
Ephrata WA 98823

From: Ron P. Sell <rpsell@grantcountywa.gov>
Sent: Thursday, July 21, 2022 2:43 PM
To: Christopher Young <cyoung@grantcountywa.gov>
Subject: JR Simplot Site Plan

Will this work for a site plan?

Ron Sell, Associate Planner

Grant County Development Services
P.O. Box 37
Ephrata, WA 98823

Location: 264 West Division Avenue Ephrata, WA
rpsell@grantcountywa.gov
(509) 754-2011 Extension 2525

Office Hours: M-F 8am-5pm

Ron P. Sell

From: Ashly Beebe <abeebe@granthealth.org>
Sent: Monday, July 25, 2022 10:40 AM
To: Ron P. Sell
Subject: RE: RJ Simplot, Variance, Discretionary Use Permit and SEPA Checklist for a Agriculture Industrial Facility - P 22-0262, P 22-0261 and P 22-0260 - Grant County Planning

[redacted]

Good morning,

GCHD has no further comments/conditions.

Thank you,

Ashly Beebe
Environmental Health Specialist I
1038 W Ivy St
Moses Lake WA 98837
Phone: 509-766-7960 ext 29 ● abeebe@granthealth.org ● Fax: 509-766-6519 ● granthealth.org

GCHD
GRANT COUNTY HEALTH DISTRICT
Public Health
PUBLIC HEALTH
Always working for a safer and healthier Grant County

From: Ron P. Sell <rpsell@grantcountywa.gov>
Sent: Tuesday, July 19, 2022 8:06 AM
To: Christopher Young <cyoung@grantcountywa.gov>; Nathan Poplawski <npoplawski@grantcountywa.gov>; Darryl Pheasant <dpheasant@grantcountywa.gov>; Ashly Beebe <abeebe@granthealth.org>; Stephanie Shopbell <sshopbell@grantcountywa.gov>; Tom Wytko <twytko@granthealth.org>; Daniel Wilson <dwilson@granthealth.org>; Katherine Bren <kbren@grantcountywa.gov>; Dave Derting <dderting@grantcountywa.gov>; Samuel Dart <sdart@grantcountywa.gov>; Matthew P. Hope <mphope@grantcountywa.gov>; Danielle Rice <drice@grantcountywa.gov>; d.smith@gcfd5.org; Rob Harris <rharris@cityofml.com>; Vivian Ramsey <vramsey@cityofml.com>; lands@gcpud.org; FrontDesk, BOR EFO <sha-efo-frontdesk@usbr.gov>; Michele Porter

GRANT COUNTY
PLANNING DEPARTMENT
P.O. BOX 37 - 264 WEST DIVISION AVENUE
EPHRATA, WA 98823
(509) 754-2011 EXT 2501

MITIGATED DETERMINATION of NON-SIGNIFICANCE

Proposal: SEPA Application #P 24-0292

Description of Proposal:

This proposal is for key infrastructure specific to a Process Water Treatment Facility (PWTF), which would be constructed to directly support operations at a potato processing facility (the Rainier Facility) at 2107 Road O NE, Moses Lake, WA 98837. Included in this proposal is the installation of a 4-inch sanitary sewer force main connecting the Rainier Facility to an existing manhole at the Moses Lake Facility (located approximately one mile to the Northwest of the project site [14124 Wheeler Rd NE, Moses Lake, WA 98837]). This sewer line shall be installed in the event that the City of Moses Lake allows a connection to their municipal sewer system in the future. The purpose of the PWTF is to treat the process wastewater discharged from Simplot's Moses Lake Facility and the Rainier Facility to a quality that allows either facility to reuse the PWTF effluent in the production process as agricultural industrial process water. Water not returned for reuse would be conveyed to an existing pond, referred to as the winter storage pond, where it would be stored until being applied to agricultural fields for land treatment administered under a joint State Waste Discharge Permit that covers the Rainier Facility and the existing Moses Lake Facility. The main components of the proposed PWTF process include screening, oil removal/collection and primary clarification, anaerobic treatment, biological treatment, nutrient removal, and reverse osmosis. Potable water required for general operation at the Rainier Facility and for operation of the PWTF will use the existing water rights attributed to the neighboring Moses Lake Facility. Potable water delivery is proposed via a 12-inch diameter pipe connecting an existing water tank at the Moses Lake Facility to the PWTF at the Rainier Facility. This waterline shall be installed in an existing utility corridor between these two facilities.

Applicant:
J.R. Simplot Company
c/o Rachel Roskelley
1099 W Front St
Boise, ID 83702

Agent:
Ryan Crotty
330 E Mill Plain Boulevard
Suite 405
Vancouver, WA 98660

Location:
The address of the subject parcel is 2649 Rd O NE, Moses Lake, WA, 98837. The site is in the S 1/2 NW LS R/W & TAX#'S 22 19 29, Grant County, WA. (GC Assessor's Parcel #18-0217-000).

Lead Agency:
Grant County Development Services
264 West Division Avenue
PO Box 37
Ephrata, WA 98823

The lead agency for SEPA review has determined that this project will not have probable significant adverse impacts on the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(c). The decision was made after a review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public upon request.

☑ There is no comment period for this MDNS pursuant to WAC 197-11-355 Optional DNS process.

☐ There is no comment period for this MDNS.

☐ This MDNS is issued under WAC 197-11-340(2). The lead agency will not act on this proposal for 14 days from the date of this decision; a subsequent 14-day appeal period will immediately follow the close of the comment period as provided by GCC § 24.04.220 and WAC 197-11-680.

Findings:

The application for this proposal was deemed to be Technically Complete on August 19, 2024. The proposal is a project action under SEPA. This proposal is not located within an Urban Growth Area in Grant County. The zoning for the site is Agricultural. The Comprehensive Plan Land Use designation for the site is Irrigated Agricultural. The project was reviewed for compliance with Chapter 24.08 "Critical Areas and Cultural Resources" of the Grant County Unified Development and according to the Grant County Critical Areas maps, there were identified Priority Habitat and Species occurrences designated within 300 feet of the boundary of the project. A Habitat Management Plan was prepared for this proposal including mitigation measures. Subject to compliance with the mitigation measures there should be no significant impact to these PHS areas. The project site also has wetland areas present as indicated in the National Wetland Inventory mapping. A Wetland Delineation and Wetland report wase prepared for this property with appropriate buffers and compensatory mitigation provided.

Mitigation Measures:

1. The landowners/applicants are responsible to determine if any other permits and/or licenses will be required by other local, state, and federal agencies. The landowners/applicants shall acquire all such permits and/or licenses as required.
2. The applicant shall comply with all mitigation measures as provided in the Habitat Management Plan for both Wetlands and Priority Habitat and Species occurrences on the property as provided in said Habitat Management Plan prepared by Vince Barthels, Biologist, of T-O Engineers dated January 2021.
3. Best Management Practices (BMPs) shall be utilized as necessary during development and implementation of this proposal in order to minimize temporary disturbances to the subject area, to lessen the risk of erosion, and to stabilize the site during construction. Proper erosion and sediment control practices must be used to prevent upland sediments from entering surface water. Dust and emissions to the air will be controlled by using water on-site for dust control as needed.
4. The proposed development shall not inflict upon adjacent land(s) smoke, dust, glare, dirt, steam, vibration, noise, electrical interference, excessive hazards, odors, or pollution which exceeds applicable local, state, or federal standards.
5. During the excavation activities associated with this Environmental Checklist, the developer shall follow the protocol for Inadvertent Discoveries for cultural resources.
6. Watering of the site will occur as necessary during the construction phase of the project to control dust and other particulates.

7. State regulations regarding safe handling of hazardous materials, if stored, used, found, or produced will be enforced during the construction process.
8. Construction activities will be limited to hours as specified by Grant County which will mitigate the impacts of potential construction noise.
9. Staging areas and all excavation and embankment placement areas shall occur only within the outlined limits of the defined proposed project action area.
10. Contractors will always have emergency spill equipment onsite and must have a Spill Prevention Plan approved and in place prior to any construction activities. The Contractor should check equipment daily for leaks and shall fix any detected leaks.
11. Temporary erosion controls (TECs) (i.e. silt fences, silt curtains, straw bales, or wattles) will be implemented according to the final construction designs. The proposed project will include regular onsite observation of work and TECs. Any deficiencies in TECs shall be addressed immediately.
12. Post-construction reseeding with the recommended seed and the prescribed native plantings used in the restoration effort should provide adequate re-vegetation, erosion control, and address any temporal construction impacts immediately outside the development footprint. A proposed planting schedule is in Table 3, found in the Wetland Mitigation Plan section of this document.
13. Noxious weed management shall be exercised in all areas where ground disturbing activities take place.
14. Any demolition waste created during site preparation and grading activities shall be disposed of at a permitted solid waste facility.
15. Applicant shall submit a Notice of Intent to Ecology for a Construction Stormwater General Permit and will develop a Stormwater Pollution Prevention Plan to supplement the Construction Stormwater General Permit.

*****

Responsible Official:

Christopher Young, Director
Grant County Development Services
PO Box 37
264 West Division Avenue
Ephrata, WA 98823
(509)754-2011, ext. 2501

Signature: Christopher Young **Date:** 9/12/2024
Christopher Young, Grant County Development Services Director

Appeals:

This determination may be appealed by written notice of appeal filed with the County pursuant to the requirements of the Grant County Unified Development Code, State RCWs and WACs. An appeal of this decision must be filed no later than 14 days from the date of this determination.

Filipy, Jenny (ECY)

From:	Kyle Heitkamp <kheitkamp@landauinc.com>
Sent:	Tuesday, April 22, 2025 11:39 AM
To:	Filipy, Jenny (ECY)
Cc:	Bauer, Martin; Andrew Erickson (andrew.erickson@Simplot.com); Eric Albright; Shauna Burr; Kaufman, Scott
Subject:	RE: Simplot Rainier - Permit Revision NOC Application
Attachments:	FW: [EXTERNAL] RE: Changes and confirmations needed to the Rainier permit; Project_Rainier_EI-ToEcology_04-21-25.xlsx

External Email

Hi Jenny,

We have reviewed your information request and provided responses to each item below. The updates for hexavalent chromium resulted in changes to the emission inventory and modeling analysis (discussed in detail below).

Ecology Information Request #1: Please provide the email guarantee from Ben Hawkes stating that the Carbon Monoxide emissions from the boiler while running on biogas will be 0.04 lb/MMBtu and not 0.08 lb/MMBtu as the manufacturer specification sheet states.

Simplot Response: We have attached the email correspondence confirming the CO emissions at 0.04 lb/MMBtu heat input.

Ecology Information Request #2: Is the emission factor of 0.04 lb/MMBtu (54 ppmv) correct, as is or is it rounded up from 0.037 lb/MMBtu (50 ppmv)? In the past we have seen that 50 ppmv for CO is achievable for low NOx natural gas boilers.

Simplot Response: We confirm that 50 ppmv at 3 percent oxygen remains BACT for CO emissions from gas-fired boilers.

Ecology Information Request #3: Please provide estimates for hexavalent chromium from the boilers and the air makeup units and compare to the toxic air pollutant thresholds in WAC 173-460-150, model if necessary. It has come to our attention that if chromium is present from a combustion source than a certain portion will be hexavalent chromium. Please provide a reference for your hexavalent chromium percentage.

Simplot Response: In past NOC applications approved by Ecology, the chromium speciation from EPA's National Air Toxics Assessment (NATA 2014)[1] and the National Emissions Inventory (NEI 2014) were used. The NEI Technical Support Document[2] includes a reference to a chromium speciation document[3], which shows total chromium speciation of 4 percent hexavalent chromium (chromium VI) and 96 percent trivalent chromium (chromium III) for natural gas combustion.

Landau calculated the chromium VI emissions from the project emissions units (boiler, production building air handling units [AHUs], and high bay freezer AHUs) using an assumption that chromium VI emissions comprise 4 percent of total chromium emissions from natural gas combustion. As shown in Table 1 below, chromium VI emissions increases from the project are above the applicable small quantity

emission rate (SQER) which requires first tier review through an air quality impact assessment (WAC 173-460-080).

Through this analysis, Simplot is also proposing the following updates to the production building AHUs, including:

- The maximum short-term combined heat input of the production AHUs is updated from 52 MMBtu/hr to 54.3 MMBtu/hr based on the current HVAC design; and
- A combined annual natural gas usage limit for the production building AHUs is calculated as follows: 54.3 MMBtu/hr * 3,900 hr/yr / 1,020 MMBtu/MMscf = 208 MMscf/yr. Simplot proposes to monitor annual natural gas usage by the production building AHUs by subtracting the boiler natural gas usage, measured using a flow meter provided by Simplot, from the production building annual natural gas usage measured using a flow meter provided by the natural gas supplier. The high bay freezer annual natural gas usage will be monitored using a separate flow meter provided by the natural gas supplier.
- The combined annual natural gas usage limit for the project be revised from 1,382 MMscf/yr to 1,098 MMscf/yr (See Table 1 below).

Table 1: Proposed Natural Gas Usage Limits

Source	Heat Input Capacity (MMBtu/hr)	Annual Operation (hr/yr)	Natural Gas Heat Content (Btu/scf)	Annual Natural Gas Usage (MMscf/yr)
Boiler	103	8,760	1,020	882
Production AHUs	54.3	3,900	1,020	208
HBF AHUs	0.93	8,760	1,020	7.99
Project Total				1,098

Landau used AERMOD to model annual chromium VI emission from the updated project emissions (Table 2 below) for comparison with the applicable annual average ASIL of 4.00E-06 µg/m^3. As shown in Table 3, AERMOD-predicted chromium VI impacts from the project are less than the applicable ASIL.

Table 2: Project Total Chromium and Chromium VI Emissions

Emission Unit	Total Chromium (lb/yr)	Chromium VI [a] (lb/yr)	Chromium VI SQER (lb/yr)
Boiler	1.23E+00	4.94E-02	
Production AHUs	2.91E-01	1.16E-02	
HBF AHUs	1.12E-02	4.49E-04	
Total		6.15E-02	6.50E-04

a. Chromium VI emissions from emission units that combust natural gas were assumed to be 4 percent of total chromium emissions.

Table 3: Project-Only Chromium VI Model Results

Toxic Air Pollutant	Averaging Period	Maximum Concentration (µg/m^3)	ASIL (µg/m^3)	Over ASIL?
Chromium VI	Annual	3.98E-06	4.00E-06	No

The proposed annual limitation on natural gas usage by production building AHUs (i.e., 208 MMscf/yr) results in annual criterial pollutant and toxic air pollutant emissions that are less than those previously submitted to Ecology, and, as such, updated modeling results for these other pollutants are not provided as it is understood that ambient concentration increases would be less than those previously submitted. An updated project emission inventory is attached, and an archive of electronic files associated with the chromium VI modeling analysis will be sent to Ecology via a file share link.

Ecology Information Request #4: I did learn this last year that fire pump engines are exempt from New Source Review per WAC 173-400-110(4)(g)(xxii) and because the emergency engine is below the 500 hp threshold it is also exempt. It is helpful to have the emission estimates that you supplied, for Title V purposes it will need to be included in the PTE for that application. You will not need to include the emissions from these engines in any additional modeling.

Simplot Response: We appreciate the clarification from Ecology. Emissions from the emergency fire water pump and emergency generator were not included in the chromium VI modeling described above.

Please let us know if you have any questions or require any additional information to deem the application complete.

Kyle

Kyle Heitkamp
PRINCIPAL
D: (206) 631-8683 | M: (406) 490-1666 | kheitkamp@landauinc.com

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From: Filipy, Jenny (ECY) <JFIL461@ECY.WA.GOV>
Sent: Monday, March 17, 2025 7:17 AM
To: Kyle Heitkamp <kheitkamp@landauinc.com>
Cc: Bauer, Martin <martin.bauer@simplot.com>; Andrew Erickson (andrew.erickson@Simplot.com) <andrew.erickson@Simplot.com>; Eric Albright <ealbright@landauinc.com>; Shauna Burr <sburr@landauinc.com>
Subject: RE: Simplot Rainier - Permit Revision NOC Application

Thank you for the update, Kyle.

From: Kyle Heitkamp <kheitkamp@landauinc.com>
Sent: Friday, March 14, 2025 2:54 PM
To: Filipy, Jenny (ECY) <JFIL461@ECY.WA.GOV>
Cc: Bauer, Martin <martin.bauer@simplot.com>; Andrew Erickson (andrew.erickson@Simplot.com) <andrew.erickson@Simplot.com>; Eric Albright <ealbright@landauinc.com>; Shauna Burr <sburr@landauinc.com>
Subject: RE: Simplot Rainier - Permit Revision NOC Application

External Email

Hi Jenny,

Quick Update. we are still working on preparing responses to each of your questions/data requests below.

You may have saw in the news that there was a fire at the Rainier site during construction, which is taking time for the project team to address. However, we will get the data requests below back to you as soon as we can.

Kyle

Kyle Heitkamp
PRINCIPAL
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From: Filipy, Jenny (ECY) <JFIL461@ECY.WA.GOV>
Sent: Tuesday, January 28, 2025 3:39 PM
To: Kyle Heitkamp <kheitkamp@landauinc.com>; Andrew Erickson (andrew.erickson@Simplot.com) <andrew.erickson@Simplot.com>; Bauer, Martin <martin.bauer@simplot.com>; Kaufman, Scott <scott.kaufman@simplot.com>; Shauna Burr <sburr@landauinc.com>; Eric Albright <ealbright@landauinc.com>
Cc: Wright, Gail (ECY) <GWRI461@ECY.WA.GOV>; Friedman, Beth (ECY) <BEFR461@ECY.WA.GOV>
Subject: RE: Simplot Rainier - Permit Revision NOC Application

Hello Kyle,

Thank you for submitting the Notice of Construction application for the Simplot – Rainer site. After careful review there is more information needed before the application can be determined complete.

- Please provide the email guarantee from Ben Hawkes stating that the Carbon Monoxide emissions from the boiler while running on biogas will be 0.04 lb/MMBtu and not 0.08 lb/MMBtu as the manufacturer specification sheet states.
- Is the emission factor of 0.04 lb/MMBtu (54 ppmv) correct, as is or is it rounded up from 0.037 lb/MMBtu (50 ppmv)? In the past we have seen that 50 ppmv for CO is achievable for low NOx natural gas boilers.
- Please provide estimates for hexavalent chromium from the boilers and the air makeup units and compare to the toxic air pollutant thresholds in WAC 173-460-150, model if necessary. It has come to our attention that if chromium is present from a combustion source than a certain portion will be hexavalent chromium. Please provide a reference for your hexavalent chromium percentage.
- I did learn this last year that fire pump engines are exempt from New Source Review per WAC 173-400-110(4)(g)(xxii) and because the emergency engine is below the 500 hp threshold it is also exempt. It is helpful to have the emission estimates that you supplied, for Title V purposes it will need to be included in the PTE for that application. You will not need to include the emissions from these engines in any additional modeling.

Thank you.

Jenny Filipy, PE
Environmental Engineer – Air Quality
Washington State Department of Ecology
(509) 405 - 2487