Statement of Basis

Permit to Construct No. P-2021.0032
Project ID 62661

Golden Eagle Cheese
Burley, Idaho

Facility ID 031-00077

Final

February 10, 2022

Shawnee Chen, PE
Senior Air Quality Engineer

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

TABLE OF CONTENTS

FACILITY INFORMATION **5**
Description 5
Permitting History 5
Application Scope 5
Application Chronology 5
TECHNICAL ANALYSIS **6**
Emissions Units and Control Equipment 6
Emissions Inventories 7
Ambient Air Quality Impact Analyses 12
REGULATORY ANALYSIS **13**
Attainment Designation (40 CFR 81.313) 13
Facility Classification 13
Permit to Construct (IDAPA 58.01.01.201) 14
Visible Emissions (IDAPA 58.01.01.625) 14
Standards for New Sources (IDAPA 58.01.01.676) 14
Particulate Matter – New Equipment Process Weight Limitations (IDAPA 58.01.01.701) 14
Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70) 15
PSD Classification (40 CFR 52.21) 15
NSPS Applicability (40 CFR 60) 15
NESHAP Applicability (40 CFR 61) 15
MACT/GACT Applicability (40 CFR 63) 15
Permit Conditions Review 16
PUBLIC REVIEW **18**
Public Comment Opportunity 18
APPENDIX A – EMISSIONS INVENTORIES
APPENDIX B – AMBIENT AIR QUALITY IMPACT ANALYSES
APPENDIX C – FACILITY DRAFT COMMENTS
APPENDIX D – PROCESSING FEE
APPENDIX E – FEDERAL REGULATION REVIEW

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BMP	best management practices
Btu	British thermal units
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CAS No.	Chemical Abstracts Service registry number
CBP	concrete batch plant
CEMS	continuous emission monitoring systems
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CI	compression ignition
CMS	continuous monitoring systems
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent emissions
COMS	continuous opacity monitoring systems
DBA	doing business as
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
FEC	Facility Emissions Cap
GACT	Generally Available Control Technology
gph	gallons per hour
gpm	gallons per minute
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
HHV	higher heating value
HMA	hot mix asphalt
hp	horsepower
hr/yr	hours per consecutive 12 calendar month period
ICE	internal combustion engines
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
iwg	inches of water gauge
km	kilometers
lb/hr	pounds per hour
lb/qtr	pound per quarter
m	meters
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
MMBtu	million British thermal units
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NSPS	New Source Performance Standards

O&M	operation and maintenance
O_2	oxygen
PAH	polyaromatic hydrocarbons
PC	permit condition
PCB	polychlorinated biphenyl
PERF	Portable Equipment Relocation Form
PM	particulate matter
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
ppm	parts per million
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
PTC	permit to construct
PTC/T2	permit to construct and Tier II operating permit
PTE	potential to emit
PW	process weight rate
RAP	recycled asphalt pavement
RFO	reprocessed fuel oil
RICE	reciprocating internal combustion engines
Rules	*Rules for the Control of Air Pollution in Idaho*
scf	standard cubic feet
SCL	significant contribution limits
SIL	significant impact level
SIP	State Implementation Plan
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO_2	sulfur dioxide
SO_x	sulfur oxides
T/day	tons per calendar day
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar month period
T2	Tier II operating permit
TAP	toxic air pollutants
TEQ	toxicity equivalent
T-RACT	Toxic Air Pollutant Reasonably Available Control Technology
ULSD	ultra-low sulfur diesel
U.S.C.	United States Code
VOC	volatile organic compounds
yd^3	cubic yards
$\mu g/m^3$	micrograms per cubic meter

FACILITY INFORMATION

Description

4321 Occidental, LLC DBA Golden Eagle Cheese (Golden Eagle) is proposing to construct a new facility to process whole milk into cheese and dried whey products in Burley, ID (Burley Facility). The proposed emissions sources include two natural gas-fired boilers, one whey dryer equipped with one natural gas-fired burner and one baghouse, one packaging operations baghouse, and one diesel-fired emergency generator. The Burley Facility is a greenfield project. Golden Eagle Cheese will be located adjacent to High Desert Milk, another dairy processing facility. The two facilities will be owned and operated by separate entities and will not be under common control.

Permitting History

This is the initial PTC for a new facility thus there is no permitting history.

Application Scope

This permit is the initial PTC for this facility.

The applicant has proposed to construct a new facility to process whole milk into cheese and dried whey products in Burley, Idaho.

Application Chronology

June 29, 2021	DEQ received an application fee.
July 1, 2021	DEQ received an application.
July 6 – July 21, 2021	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
July 30, 2021	DEQ determined that the application was incomplete.
August 9, 2021	DEQ received supplemental information from the applicant.
September 8, 2021	DEQ determined that the application was incomplete.
October 7, 2021	DEQ received supplemental information from the applicant.
November 3, 2021	DEQ determined that the application was complete.
December 20, 2021	DEQ made available the draft permit and statement of basis for peer and regional office review.
December 30, 2021	DEQ made available the draft permit and statement of basis for applicant review.
February 8, 2022	DEQ received the permit processing fee.
February 10, 2022	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION[a]

Source ID No.	Sources	Control Equipment
Boiler 1	Boiler 1 Manufacturer: Johnston Boiler Company Model: PFTX 900-4 Manufacture Date: TBD Date of Installation: TBD Heat input rating: 36.4 MMBtu/hr Fuel: natural gas	None
Boiler 2	Boiler 2 Manufacturer: Johnston Boiler Company Model: PFTX 900-4 Series: 509 Manufacture Date: TBD Date of Installation: TBD Heat Input Rating: 36.4 MMBtu/hr Fuel: natural gas	None
NA	Whey Dryer Manufacturer: Dahmes Stainless, Inc. Model: Tall Form Dryer Type: spray dryer Manufacture Date: TBD Date of Installation: TBD Dryer Feed Rate @ 35% TS: 9621 lb/hr Powder rate @ 5% moisture: 3,546 lb/hr Heat Transfer Method: indirectly heated The shaking bed and powder transport operations	Whey Dryer Baghouse Manufacturer: Dahmes Stainless Inc. Model: 21200-125 Type: N/A $PM_{2.5}/PM_{10}$ Emission Concentration: 0.0081 gr/dscf
NA	Whey Dryer Burner Manufacturer: Dahmes Stainless, Inc. Manufacture Date: TBD Date of Installation: TBD Heat Input Rating: 20 MMBtu/hr Fuel: natural gas	None
NA	Packaging Operations Area Powder rate @ 5% moisture: 3,546 lb/hr	Packaging Area Baghouse/Dust Collector Manufacturer: Dahmes Stainless Inc. Model: GS-4 Type: N/A $PM_{2.5}/PM_{10}$ Emission Concentration: 0.0061 gr/dscf
NA	Diesel-Fired Emergency Generator Manufacturer: CAT Model: D500 GC Manufacture Date: TBD Model Year: TBD IC Engine Cylinder Displacement: 15.2 liters ÷ 6 cylinders = 2.5 liters per cylinder Maximum Rated Horsepower: 580 bhp Maximum Rated Fuel Flow: 36.2 gal/hr EPA Certification: Tier 2 Ignition Type: compression Fuel: distillate fuel oil (ULSD), maximum sulfur content 15 ppm (0.0015% by weight) or less Testing schedule: 100 hrs/yr	None

a) Refer to the modeling memo for Emission Point ID No. and stack parameters.

Emissions Inventories

Potential to Emit

IDAPA 58.01.01 defines Potential to Emit as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is state or federally enforceable. Secondary emissions do not count in determining the potential to emit of a facility or stationary source.

Using this definition of Potential to Emit, an emission inventory was developed for the facility (see Appendix A) associated with this proposed project. Emissions estimates of criteria pollutant, HAP PTE were based on emission factors from AP-42 or from the manufacturers, operation of 8,760 hours per year, and process information specific to the facility for this proposed project.

The emission from the two boilers for particulates, CO, NOx, VOC, and CO_2 are estimated using the emission factors provided by Johnston Boiler Company. The emission for SO_2, lead, CH_4, N_2O, and HAP/TAP are estimated using the emission factors from AP-42 Section 1.4.

The whey dryer burner heat input capacity and emission factors for PM_{10} and $PM_{2.5}$ are obtained from the 5/14/2021 DAHMES facility report included in Appendix B of the application. Emission factors for PM_{10} and $PM_{2.5}$ are assumed to be equal to PM. All other pollutant emissions are quantified using emission factors from AP-42 Section 1.4. Though the 5/14/2021 DAHMES report includes estimated emission factors for NOx and CO, the applicant has chosen not to use them because these emissions factors are believed to be overly-conservative based on correspondence with the burner manufacturer as stated in the application.

The whey dryer will be equipped with a baghouse for control of particulate emissions from whey drying fines. The dryer baghouse is proposed to operate continuously (8,760 hours/year). The 5/14/2021 DAHMES report specifies the PM emission rate for the baghouse which is used for the PTE emissions quantification. Emission rates of PM_{10} and $PM_{2.5}$ are assumed to be equal to the PM rate.

The proposed facility will be equipped with a nuisance dust collector with a baghouse for particulate control in the product packing area. The baghouse is proposed to operate continuously (8,760 hr/yr) for the purposes of PTE calculates and dispersion modeling. The 5/14/2021 DAHMES report specifies a lb/hr PM emission rate for the baghouse, which is used for PTE emissions quantification. Emission rates of PM_{10} and $PM_{2.5}$ are assumed equal to the PM rate.

The Burley facility will have a single diesel-fired emergency generator for backup electricity generation. The manufacturer specifications for the emergency generator are used for the estimation of potential emissions. A precise power rating for the engine is not specified by the manufacturer. Criteria pollutant emissions factors are based on the fuel flow or exhaust stack flow. HAP/TAP emission factors are obtained from AP-42 Section 3.3 and are also based on fuel flow. The maximum rated fuel flow and exhaust stack flow (102.1 m^3/min at 531.1 °C) are used for PTE calculations. The annual non-emergency operation of the emergency generator will be limited to 100 hr/yr by NSPS Subpart IIII. The 100 hr/yr limit will be used for the annual PTE calculations.

Uncontrolled Potential to Emit

Using the definition of Potential to Emit, uncontrolled Potential to Emit is then defined as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall **not** be treated as part of its design **since** the limitation or the effect it would have on emissions **is not** state or federally enforceable.

The uncontrolled Potential to Emit is used to determine if a facility is a "Synthetic Minor" source of emissions. Synthetic Minor sources are facilities that have an uncontrolled Potential to Emit for regulated air pollutants or HAP above the applicable Major Source threshold without permit limits.

The following table presents the uncontrolled Potential to Emit for regulated air pollutants. It is calculated using

the PTE submitted by the applicant without counting the baghouse control efficiency. The baghouse control efficiency is assumed to be 99%. For the emergency generator, the uncontrolled Potential to Emit is based upon operation of 8,760 hr/yr. See Appendix A for a detailed presentation of the calculations and the assumptions used to determine emissions for each emissions unit.

Table 2 UNCONTROLLED POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	$PM_{10}/PM_{2.5}$	SO_2	NO_X	CO	VOC
	T/yr	T/yr	T/yr	T/yr	T/yr
Point Sources					
Boilers and Dryer Burners	0.93	0.24	19.81	18.47	1.73
Dryer Baghouse and Packaging Area Dust Collectors	1,169.46	--	--	--	--
Emergency Generator	0.19	0.03	42.78	6.06	0.18
Total, Point Sources	**1,170.58**	**0.27**	**62.58**	**24.53**	**1.91**

a) assume baghouse control efficiency is 99%.
b) use operating hours of 8,760 hr/yr for the emergency generator.

The following table presents the uncontrolled Potential to Emit for HAP pollutants. It is calculated based on the PTE submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations and the assumptions used to determine emissions for each emissions unit. For the emergency generator, the uncontrolled Potential to Emit is based upon operation of 8,760 hr/yr. Then, the worst-case maximum HAP Potential to Emit was determined for this facility operation. It is 0.85 T/yr.

Table 3 **UNCONTROLLED POTENTIAL TO EMIT FOR HAZARDOUS AIR POLLUTANTS**

Hazardous Air Pollutants	PTE (T/yr)
Benzene	2.11E-02
Formaldehyde	5.58E-02
Toluene	1.03E-02
2-Methylnaphthalene	9.65E-06
3-Methylchloranthrene	7.23E-07
7,12-Dimethylbenz(a)anthracene	6.43E-06
Acenaphthylene	1.11E-04
Benzo(a)pyrene	4.57E-06
Benzo(b)fluoranthene	2.88E-06
Benzo(k)fluoranthene	4.09E-06
Dibenzo(a,h)anthracene	1.31E-05
Dichlorobenzene	4.82E-04
Hexane	7.23E-01
Naphthalene	2.09E-03
Acenaphthene	3.16E-05
Anthracene	4.16E-05
Benzo(a)anthracene	3.72E-05
Benzo(g,h,i)perylene	1.11E-05
Chrysene	8.39E-06
Fluoranthene	1.67E-04
Fluorene	6.35E-04
Indeno(1,2,3-cd)pyrene	8.87E-06
Phenanthrene	6.45E-04
Pyrene	1.06E-04
Arsenic	8.04E-05
Beryllium	4.82E-06

Hazardous Air Pollutants	PTE (T/yr)
Cadmium	4.42E-04
Chromium	5.63E-04
Cobalt	3.38E-05
Lead	2.01E-04
Manganese	1.53E-04
Mercury	1.05E-04
Nickel	8.44E-04
Selenium	9.65E-06
7-PAH	7.92E-05
POM	1.84E-03
Xylene	6.19E-03
1,3-Butadiene	8.49E-04
Acetaldehyde	1.67E-02
Acrolein	2.01E-03
Total	**0.85**

Pre-Project Potential to Emit

Pre-project Potential to Emit is used to establish the change in emissions at a facility as a result of this project.

This is a new facility. Therefore, pre-project emissions are set to zero for all criteria pollutants.

Post Project Potential to Emit

Post project Potential to Emit is used to establish the change in emissions at a facility and to determine the facility's classification as a result of this project. Post project Potential to Emit includes all permit limits resulting from this project.

The following table presents the post project Potential to Emit for criteria pollutants from all emissions units at the facility as submitted by the application and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 4 POST PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	$PM_{10}/PM_{2.5}$		SO_2		NO_X		CO		VOC	
	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]
Whey Dryer Baghouse	2.63	11.5	---	---	---	---	---	---	---	---
Whey Dryer Burner	0.14	0.61	0.011	0.050	1.90	8.3	1.60	7.0	0.10	0.46
Packaging Operations Area Baghouse	0.04	0.2	---	---	---	---	---	---	---	---
Boiler 1	0.036	0.16	0.02	0.096	1.31	5.7	1.31	5.7	0.15	0.64
Boiler 2	0.036	0.16	0.02	0.096	1.31	5.7	1.31	5.7	0.15	0.64
Emergency Generator	0.044	0.00	0.01	0.00	9.77	0.49	1.38	0.07	0.04	0.00
Post Project Totals	**2.93**	**12.63**	**0.06**	**0.24**	**14.29**	**20.30**	**5.60**	**18.54**	**0.44**	**1.73**

a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.
b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.

Change in Potential to Emit

The change in facility-wide potential to emit is used to determine if a public comment period may be required and to determine the processing fee per IDAPA 58.01.01.225. The following table presents the facility-wide change in the potential to emit for criteria pollutants.

Table 5 CHANGES IN POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	$PM_{10}/PM_{2.5}$		SO_2		NO_X		CO		VOC	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Pre-Project Potential to Emit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Post Project Potential to Emit	2.93	12.63	0.06	0.24	14.29	20.30	5.60	18.54	0.44	1.73
Changes in Potential to Emit	**2.93**	**12.63**	**0.06**	**0.24**	**14.29**	**20.30**	**5.60**	**18.54**	**0.44**	**1.73**

TAP Emissions

A summary of the estimated PTE for emissions increase of toxic air pollutants (TAP) is provided in the following table. This is a new facility. Therefore, pre-project emissions are set to zero for all TAP.

Table 6 PROJECT POTENTIAL TO EMIT FOR TOXIC AIR POLLUTANTS

Pollutant	TAPs					Above EL?
	Boilers[1,2]	Dryer Burner[2]	Emergency Generator[1,3]	Site-Wide	EL[4]	
	(lb/hr)					
Benzene	N/A	4.00E-05	N/A	4.00E-05	4.00E-05	No
Formaldehyde	N/A	1.43E-03	N/A	1.43E-03	1.43E-03	**Yes**
Toluene	N/A	6.48E-05	N/A	6.48E-05	6.48E-05	No
2-Methylnaphthalene	N/A	4.57E-07	N/A	4.57E-07	4.57E-07	No
3-Methylchloranthrene	N/A	3.43E-08	N/A	3.43E-08	3.43E-08	No
7,12-Dimethylbenz(a)anthracene	N/A	3.05E-07	N/A	3.05E-07	3.05E-07	No
Acenaphthylene	N/A	3.43E-08	N/A	3.43E-08	3.43E-08	No
Benzo(a)pyrene	N/A	2.29E-08	N/A	2.29E-08	2.29E-08	No
Benzo(b)fluoranthene	N/A	3.43E-08	N/A	3.43E-08	3.43E-08	No
Benzo(k)fluoranthene	N/A	3.43E-08	N/A	3.43E-08	3.43E-08	No
Dibenzo(a,h)anthracene	N/A	2.29E-08	N/A	2.29E-08	2.29E-08	No
Dichlorobenzene	N/A	2.29E-05	N/A	2.29E-05	2.29E-05	No
Hexane	N/A	3.43E-02	N/A	3.43E-02	3.43E-02	No
Naphthalene	N/A	1.16E-05	N/A	1.16E-05	1.16E-05	No
Acenaphthene	N/A	3.43E-08	N/A	3.43E-08	3.43E-08	No
Anthracene	N/A	4.57E-08	N/A	4.57E-08	4.57E-08	No
Benzo(a)anthracene	N/A	3.43E-08	N/A	3.43E-08	3.43E-08	No
Benzo(g,h,i)perylene	N/A	2.29E-08	N/A	2.29E-08	2.29E-08	No
Chrysene	N/A	3.43E-08	N/A	3.43E-08	3.43E-08	No
Fluoranthene	N/A	5.71E-08	N/A	5.71E-08	9.10E-05	No
Fluorene	N/A	5.33E-08	N/A	5.33E-08	9.10E-05	No
Indeno(1,2,3-cd)pyrene	N/A	3.43E-08	N/A	3.43E-08	2.00E-06	No
Phenanthrene	N/A	3.24E-07	N/A	3.24E-07	9.10E-05	No
Pentane	1.89E-01	4.95E-02	--	2.39E-01	1.18E+02	No
Pyrene	N/A	9.52E-08	N/A	9.52E-08	9.10E-05	No
Arsenic	N/A	3.81E-06	N/A	3.81E-06	1.50E-06	**Yes**
Barium	3.20E-04	8.38E-05	--	4.04E-04	3.30E-02	No
Beryllium	N/A	2.29E-07	N/A	2.29E-07	2.80E-05	No
Cadmium	N/A	2.10E-05	N/A	2.10E-05	3.70E-06	**Yes**

Pollutant	TAPs					Above EL?
	Boilers[1,2]	Dryer Burner[2]	Emergency Generator[1,3]	Site-Wide	EL[4]	
	(lb/hr)					
Chromium	N/A	2.67E-05	N/A	2.67E-05	3.30E-02	No
Cobalt	N/A	1.60E-06	N/A	1.60E-06	3.30E-03	No
Copper	6.18E-05	1.62E-05	--	7.80E-05	6.70E-02	No
Lead	N/A	--	N/A	--	N/A	No
Manganese	N/A	7.24E-06	N/A	7.24E-06	3.33E-01	No
Mercury	N/A	--	N/A	--	N/A	No
Molybdenum	8.00E-05	2.10E-05	--	1.01E-04	3.33E-01	No
Nickel	N/A	4.00E-05	N/A	4.00E-05	2.70E-05	**Yes**
Selenium	N/A	4.57E-07	N/A	4.57E-07	1.30E-02	No
Vanadium	1.67E-04	4.38E-05	--	2.11E-04	3.00E-03	No
7-PAH	N/A	2.17E-07	N/A	2.17E-07	2.00E-06	No
POM	N/A	1.68E-06	N/A	1.68E-06	9.10E-05	No
Xylene	N/A	--	N/A	--	N/A	No
1,3-Butadiene	N/A	--	N/A	--	N/A	No
Acetaldehyde	N/A	--	N/A	--	N/A	No
Acrolein	N/A	--	N/A	--	N/A	No

[1] Boilers and Emergency Generator TAP emission rates included only for TAPs that are not HAPs. Per IDAPA 58.01.01.210.20, sources covered by 40 CFR Part 63 Regulations do not count TAPs that are HAPs as part of the project emissions increase for comparison to screening emission levels (Els). The boilers are covered by 40 CFR 63 Subpart JJJJJJ, and emergency generator are by 40 CFR 63 Subpart ZZZZ.

[2] Boilers and dryer burner have potential operation of 8,760 hours per year, therefore short-term maximum emission rates are used for both TAPs listed under IDAPA 58.01.01.585 and 586.

[3] Emergency generator has potential operations of 100 hours per year, therefore 24-hr and annual averaged lb/hr emission rates would differ. However, this is irrelevant because no applicable TAPs emissions are compared to Els in accordance with IDAPA 58.01.01.210.20.

Modeling is required for Formaldehyde, Arsenic, Cadmium, and Nickel because their respective ELs identified in IDAPA 58.01.01.585 or 586 were exceeded.

Post Project HAP Emissions

The following table presents the post project potential to emit for HAP pollutants from all emissions units at the facility as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 7 HAZARDOUS AIR POLLUTANTS EMISSIONS POTENTIAL TO EMIT SUMMARY

Hazardous Air Pollutants	PTE (T/yr)
Benzene	1.08E-03
Formaldehyde	3.04E-02
Toluene	1.47E-03
2-Methylnaphthalene	9.65E-06
3-Methylchloranthrene	7.23E-07
7,12-Dimethylbenz(a)anthracene	6.43E-06
Acenaphthylene	1.98E-06
Benzo(a)pyrene	5.29E-07
Benzo(b)fluoranthene	7.48E-07
Benzo(k)fluoranthene	7.62E-07
Dibenzo(a,h)anthracene	6.27E-07

Hazardous Air Pollutants	PTE (T/yr)
Dichlorobenzene	4.82E-04
Hexane	7.23E-01
Naphthalene	2.66E-04
Acenaphthene	1.08E-06
Anthracene	1.43E-06
Benzo(a)anthracene	1.14E-06
Benzo(g,h,i)perylene	6.04E-07
Chrysene	8.11E-07
Fluoranthene	3.09E-06
Fluorene	8.37E-06
Indeno(1,2,3-cd)pyrene	8.16E-07
Phenanthrene	1.41E-05
Pyrene	3.19E-06
Arsenic	8.04E-05
Beryllium	4.82E-06
Cadmium	4.42E-04
Chromium	5.63E-04
Cobalt	3.38E-05
Lead	2.01E-04
Manganese	1.53E-04
Mercury	1.05E-04
Nickel	8.44E-04
Selenium	9.65E-06
7-PAH	5.43E-06
POM	5.61E-05
Xylene	7.07E-05
1,3-Butadiene	9.70E-06
Acetaldehyde	1.90E-04
Acrolein	2.29E-05
Total	**0.76**

Ambient Air Quality Impact Analyses

As presented in the Modeling Memo in Appendix B, the estimated emission rates of PM_{10}, $PM_{2.5}$, NO_X, and formaldehyde, arsenic, cadmium, and nickel from this project exceeded applicable screening emission levels (EL) and published DEQ modeling thresholds established in IDAPA 58.01.01.585-586 and in the State of Idaho Air Quality Modeling Guideline[1]. Refer to the Emissions Inventories section for additional information concerning the emission inventories.

The applicant has demonstrated pre-construction compliance to DEQ's satisfaction that emissions from this facility will not cause or significantly contribute to a violation of any ambient air quality standard. The applicant has also demonstrated pre-construction compliance to DEQ's satisfaction that the emissions increase due to this permitting action will not exceed any acceptable ambient concentration (AAC) or acceptable ambient concentration for carcinogens (AACC) for toxic air pollutants (TAP). A summary of the Ambient Air Impact

[1]Table 2. Modeling Applicability Thresholds (values in pounds/hour) in Guideline for Performing Air Quality Impact Analyses, July 2021

Analysis for TAP is provided in Appendix B.

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

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

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

Facility Classification

The AIRS/AFS facility classification codes are as follows:

For HAPs (Hazardous Air Pollutants) Only:

A = Use when any one HAP has permitted emissions > 10 T/yr or if the aggregate of all HAPS (Total HAPs) has permitted emissions > 25 T/yr.

SM80 = Use if a synthetic minor (uncontrolled HAPs emissions are > 10 T/yr or if the aggregate of all uncontrolled HAPs (Total HAPs) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits > 8 T/yr of a single HAP or ≥ 20 T/yr of Total HAPs.

SM = Use if a synthetic minor (uncontrolled HAPs emissions are > 10 T/yr or if the aggregate of all uncontrolled HAPs (Total HAPs) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits < 8 T/yr of a single HAP and/or < 20 T/yr of Total HAPs.

B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 10 and 25 T/yr HAP major source thresholds.

UNK = Class is unknown.

For All Other Pollutants:

A = Use when permitted emissions of a pollutant are > 100 T/yr.

SM80 = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are ≥ 80 T/yr.

SM = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are < 80 T/yr.

B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 100 T/yr major source threshold.

UNK = Class is unknown.

Table 8 REGULATED AIR POLLUTANT FACILITY CLASSIFICATION

Pollutant	Uncontrolled PTE (T/yr)	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM_{10}	>100	<100	**100**	SM
$PM_{2.5}$	>100	<100	**100**	SM
SO_2	<100	<100	**100**	B
NO_X	<100	<100	**100**	B
CO	<100	<100	**100**	B
VOC	<100	<100	**100**	B
HAP (single)	<100	<100	**10**	B
Total HAPs	<100	<100	**25**	B

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201..... Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the proposed new plant. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625..... Visible Emissions

The sources of PM emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Conditions 2.4, 2.9, 3.4, 3.6, and 4.4.

Standards for New Sources (IDAPA 58.01.01.676)

IDAPA 58.01.01.676..... Standards for New Sources

The fuel burning equipment located at this facility, with a maximum rated input of ten (10) million BTU per hour or more, are subject to a particulate matter limitation of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume when combusting gaseous fuels. Fuel-Burning Equipment is defined as any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer. This requirement is assured by Permit Conditions 2.5, 2.9, 3.5, and 3.6.

Particulate Matter – New Equipment Process Weight Limitations (IDAPA 58.01.01.701)

IDAPA 58.01.01.701..... Particulate Matter – New Equipment Process Weight Limitations

IDAPA 58.01.01.700 through 703 set PM emission limits for process equipment based on when the piece of equipment commenced operation and the piece of equipment's process weight (PW) in pounds per hour (lb/hr). IDAPA 58.01.01.701 and IDAPA 58.01.01.702 establish PM emission limits for equipment that commenced operation on or after October 1, 1979, and for equipment operating prior to October 1, 1979, respectively.

For equipment that commenced operation on or after October 1, 1979, the PM allowable emission rate (E) is based on one of the following equations:

IDAPA 58.01.01.701.01.a: If PW is < 9,250 lb/hr; $E = 0.045 (PW)^{0.60}$

IDAPA 58.01.01.701.01.b: If PW is ≥ 9,250 lb/hr; $E = 1.10 (PW)^{0.25}$

For equipment that commenced prior to October 1, 1979, the PM allowable emission rate is based on one of the following equations:

IDAPA 58.01.01.702.01.a: If PW is < 17,000 lb/hr; $E = 0.045 (PW)^{0.60}$

IDAPA 58.01.01.702.01.b: If PW is ≥ 17,000 lb/hr; $E = 1.12 (PW)^{0.27}$

The emissions from the new whey dryer and packaging operation will be controlled by baghouses. Therefore, the emissoins will be well below the new equipment process weight limitations. So long as the facility operates as designed, compliance with this requirement will be demonstrated.

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

IDAPA 58.01.01.301..... Requirement to Obtain Tier I Operating Permit

Post project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for any criteria air pollutant or 10 tons per year for any one HAP or 25 tons per year for all HAP combined as demonstrated previously in the Emissions Inventories Section of this analysis. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006 and the requirements of IDAPA 58.01.01.301 do not apply.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 ..... Prevention of Significant Deterioration of Air Quality

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

NSPS Applicability (40 CFR 60)

40 CFR 60, Subpart Dc ..... Standards of Performance for Small Industrial–Commercial–Institutional Steam Generating Units

The two boilers at the Burley facility are industrial steam generating units subject to 40 CFR 60 Subpart Dc because each boiler at the Burley facility has a fuel burning capacity between 10 and 100 MMBtu/hr (40 CFR 60.40(c)(e)) and is modified or constructed after June 9, 1989.

The two boilers at this facility only burn natural gas as fuel as required by Permit Condition 3.6. Therefore, the only sections of this subpart that are applicable to the boilers at this facility are the Applicability and Delegation of Authority specified in 40 CFR 60.40c(a), the Recordkeeping requirements of 40 CFR 60.48c(g) and (i), and the Reporting requirements of 40 CFR 60.48c(a), (a)(1), and (a)(3). A detailed regulatory analysis can be found in Appendix E of the SOB. This subpart is delegated to DEQ.

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

The Burley facility will have one diesel-fired CAT D500 GC stationary compression ignition internal combustion engine which will be manufactured and constructed after 2006. In accordance with 40 CFR 60.4200(a)(2)(i), the diesel-fired emergency generator at the Burley facility is subject to NSPS Subpart IIII. A detailed regulatory analysis can be found in Appendix E of the SOB. This subpart is delegated to DEQ.

NESHAP Applicability (40 CFR 61)

The proposed source is not an affected source subject to NESHAP in 40 CFR 61.

MACT/GACT Applicability (40 CFR 63)

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

The diesel-fired emergency generator at the Burley facility is subject to 40 CFR 63 Subpart ZZZZ. In accordance with 40 CFR 63.6590 (c), the CAT stationary RICE at the Burley facility will be subject to the requirements of 40 CFR Part 60 Subpart IIII. Therefore, no further requirements of this subpart apply to the engines. Refer to Appendix E for a detailed regulatory analysis.

Permit Conditions Review

This section describes the permit conditions for this initial permit.

Permit Condition 1.1 states the purpose of this permitting action.

Table 1.1 lists the regulated sources.

Permit conditions 2.1, 2.2 and Table 2.1 describe the whey dryer and whey powder packaging. According to the information from the applicant on 12/8/2021, fines from the shaking bed and powder transport is ultimately exhausted through the whey dryer baghouse. The facility has a sifter, but it is a sealed unit and is not vented.

Permit condition 2.3 includes emission limits that are for ensuring compliance with 1-hr NOx NAAQS, 24-hr $PM_{2.5}$ NAAQS, and annual $PM_{2.5}$ NAAQS. The ambient impact from this project (Golden Eagle Cheese and High Desert Mike combined) is 96.2% for 1-hr NO_2 and 92.5% for annual $PM_{2.5}$ NAAQS. The accumulative NAAQS analysis shows that the impact is greater than 100% of the 24-hr $PM_{2.5}$ NAAQS at a few receptors. However, the applicant has shown that the impact from the new facility (Golden Eagle Cheese) alone would be less than significant impact level (SIL), that is 91% of the SIL. Other emissions limits are mainly for bookkeeping purposes.

Permit condition 2.4 is an opacity limit that applies to the whey dryer baghouse stack, whey dryer burner stack, and any associated opening, respectively.

Permit Condition 2.5 is a grain loading standard that applies to the whey dryer burner.

Permit Condition 2.6 is a throughput limit for the whey dryer. The baghouse flowrate and emission rate are based on the dryer feed rate of 9,621 lb/hr @35% total solid, evaporation rate of 6,151 lb/hr, and powder rate of 3,546 lb/hr @ 5% moisture. The daily throughput limit of 85,104 lb/day is developed by multiplying 3,546 lb/hr @ 5% moisture by 24 hr/day.

Permit Condition 2.7 requires the applicant to use whey dryer baghouse to control particulate emissions from the whey dryer, the shaking bed, and the powder transport operations, the information provided by the applicant through email on December 8th, 2021. The emissions concentration of the baghouse is taken from the EI spreadsheet of the application.

Permit Condition 2.8 is a standard permit condition taken from DEQ's internal guidance for baghouse.

Permit Condition 2.9 limits the whey dryer burner to burn natural gas only. This assures compliance with the dryer burner emissions limits and the grain load standard.

Permit Condition 2.10 states that the dryer baghouse stack release height shall be 115 feet above ground or higher and that the stack must exhaust vertically and uninterrupted without a raincap. This requirement is taken from the modeling memo as compliance with the 24-hour $PM_{2.5}$ NAAQS was demonstrated with this stack release height and stack configuration.

Permit Condition 2.11 requires the permittee to monitor the whey dryer throughput to demonstrate compliance with the whey dryer throughput limit.

Permit Condition 2.12 requires the permittee to conduct a one-time $PM_{2.5}$ source test on the whey dryer baghouse to verify the emissions concentration of the baghouse used in the EI calculation and to demonstrate compliance with the $PM_{2.5}$ emissions limits. At the estimated emission rate, the ambient impacts from Golden Eagle Cheese alone are about 50% of the respective NAAQS for $PM_{2.5}$; a tier approach for consequent source test is not required in the permit at this time.

Permit Condition 2.13 requires a one-time source test on the whey dryer burner to demonstrate compliance with the NOx emissions limits as the applicant has chosen to use the NOx emission factor from AP-42 instead of the emission rate provided by the manufacturer in the EI. The NOx source test is for verifying the estimated emissions rates. At the estimated emission rate, the ambient impact from Golden Eagle Cheese alone is about 50% of the respective NAAQS for NOx; a tier approach for consequent source test is not required in the permit at this time.

Permit Condition 2.14 includes the general requirements that apply to source testing for both $PM_{2.5}$ and NOx.

Permit Conditions 3.1, 3.2, and Table 3.1 describe the two natural gas-fired boilers. According to the applicant, space heaters are not considered at this time as the residual heat from the process may provide enough heating.

Permit condition 3.3 and Table 3.2 include the emission limits of the two boilers. These emissions limits are for ensuring compliance with the NAAQS and for bookkeeping purposes.

Permit Conditions 3.4 and 3.5 specify the opacity limit and grain loading limit that apply to the two natural gas-fired boilers. As long as the boilers burn natural gas, the boilers will comply with these two limits.

Permit Condition 3.6 specifies that the boilers can only burn natural gas.

Permit conditions 3.7 - 3.12 are NSPS requirements. The boilers are subject to 40 CFR 60 Subpart Dc. Because they are natural gas-fired boilers, the applicant has requested, as an alternative, to monitor the natural gas usage monthly.

Permit Conditions 4.1, 4.2 and Table 4.1 describe the diesel fired emergency generator engine.

Permit Condition 4.3 and Table 4.2 include the emission limits of the emergency generator engine. The limits are for ensuring compliance with the NAAQS and for bookkeeping purposes.

Permit Condition 4.4 includes the opacity limit for the engine.

Permit Conditions 4.5-4.15 are NSPS requirements. the emergency generate IC engine is subject to 40 CFR 60 Subpart IIII. Detail regulatory analysis can be found in Appendix E of the SOB.

Permit Condition 5.1

The duty to comply general compliance provision requires that the permittee comply with all of the permit terms and conditions pursuant to Idaho Code §39-101.

Permit Condition 5.2

The maintenance and operation general compliance provision requires that the permittee maintain and operate all treatment and control facilities at the facility in accordance with IDAPA 58.01.01.211.

Permit Condition 5.3

The obligation to comply general compliance provision specifies that no permit condition is intended to relieve or exempt the permittee from compliance with applicable state and federal requirements, in accordance with IDAPA 58.01.01.212.01.

Permit Condition 5.4

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

Permit Condition 5.5

The permit expiration construction and operation provision specifies that the permit expires if construction has not begun within two years of permit issuance or if construction has been suspended for a year in accordance with IDAPA 58.01.01.211.02.

Permit Condition 5.6

The notification of construction and operation provision requires that the permittee notify DEQ of the dates of construction and operation, in accordance with IDAPA 58.01.01.211.01 and 211.03.

Permit Condition 5.7

The performance testing notification of intent provision requires that the permittee notify DEQ at least 15 days prior to any performance test to provide DEQ the option to have an observer present, in accordance with IDAPA 58.01.01.157.03.

Permit Condition 5.8

The performance test protocol provision requires that any performance testing be conducted in accordance with the procedures of IDAPA 58.01.01.157, and encourages the permittee to submit a protocol to DEQ for approval prior to testing.

Permit Condition 5.9

The performance test report provision requires that the permittee report any performance test results to DEQ within 60 days of completion, in accordance with IDAPA 58.01.01.157.04-05.

Permit Condition 5.10

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

Permit Condition 5.11

The excess emissions provision requires that the permittee follow the procedures required for excess emissions events, in accordance with IDAPA 58.01.01.130-136.

Permit Condition 5.12

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

Permit Condition 5.13

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

Permit Condition 5.14

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

Permit Condition 5.15

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

Permit Condition 5.16

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

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c or IDAPA 58.01.01.404.01.c. During this time, there was not a request for a public comment period on DEQ's proposed action. Refer to the chronology for public comment opportunity dates.

APPENDIX A – EMISSIONS INVENTORIES

Potential-To-Emit

Source	PM10	PM2.5	SO2	NOx	CO	VOC	Lead	Individual HAP: Hexane	Total HAP
	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	**lb/hr**	**lb/hr**
Boilers and Burners	0.21	0.21	0.06	4.52	4.22	0.40	4.59E-05	0.17	0.17
Baghouses/Dust Collectors	2.67	2.67	--	--	--	--	--	--	--
Emergency Generator	0.04	0.04	0.01	9.77	1.38	0.04	--	--	0.02
Total	2.93	2.93	0.06	14.29	5.60	0.44	4.59E-05	0.17	0.19

Table 2. Uncontrolled Potential-To-Emit

Source	PM10	PM2.5	SO2	NOx	CO	VOC	Lead	Individual HAP: Hexane	Total HAP
	tpy	**tpy**	**tpy**	**tpy**	**tpy**	**tpy**	**tpy**	**tpy**	**tpy**
Boilers and Burners	0.93	0.93	0.24	19.81	18.47	1.73	2.01E-04	0.72	0.76
Baghouses/Dust Collectors	1169.46	1169.46	--	--	--	--	--	--	--
Emergency Generator	0.19	0.19	0.03	42.78	6.06	0.18	--	--	0.09
Total	1170.58	1170.58	0.27	62.58	24.53	1.91	2.01E-04	0.72	0.85

a) assume baghouse control efficiency is 99%
b) operating hours 8760 hr/yr

Table A1.b Site-Wide HAP/TAP PTE and Modeling Applicability

Pollutant	HAP?	Non-Carcinogenic TAP?	Carcinogenic TAP?	HAPs	TAPs				EL[4]	Above EL?
				Site-Wide	Boilers[1,2]	Dryer Burner[2]	Emergency Generator[1,3]	Site-Wide		
				(tpy)	(lb/hr)				(lb/hr)	
Benzene	Yes	No	Yes	1.08E-03	N/A	4.00E-05	N/A	4.00E-05	8.00E-04	No
Formaldehyde	Yes	No	Yes	3.04E-02	N/A	1.43E-03	N/A	1.43E-03	5.10E-04	**Yes**
Toluene	Yes	Yes	No	1.47E-03	N/A	6.48E-05	N/A	6.48E-05	2.50E+01	No
2-Methylnaphthalene	Yes	No	Yes	9.65E-06	N/A	4.57E-07	N/A	4.57E-07	9.10E-05	No
3-Methylchloranthrene	Yes	No	Yes	7.23E-07	N/A	3.43E-08	N/A	3.43E-08	9.10E-05	No
7,12-Dimethylbenz(a)anthracene	Yes	No	Yes	6.43E-06	N/A	3.05E-07	N/A	3.05E-07	9.10E-05	No
Acenaphthylene	Yes	No	Yes	1.98E-06	N/A	3.43E-08	N/A	3.43E-08	9.10E-05	No
Benzo(a)pyrene	Yes	No	Yes	5.29E-07	N/A	2.29E-08	N/A	2.29E-08	2.00E-06	No
Benzo(b)fluoranthene	Yes	No	Yes	7.48E-07	N/A	3.43E-08	N/A	3.43E-08	2.00E-06	No
Benzo(k)fluoranthene	Yes	No	Yes	7.62E-07	N/A	3.43E-08	N/A	3.43E-08	2.00E-06	No
Dibenzo(a,h)anthracene	Yes	No	Yes	6.27E-07	N/A	2.29E-08	N/A	2.29E-08	2.00E-06	No
Dichlorobenzene	Yes	Yes	No	4.82E-04	N/A	2.29E-05	N/A	2.29E-05	3.00E+01	No
Hexane	Yes	Yes	No	7.23E-01	N/A	3.43E-02	N/A	3.43E-02	1.20E+01	No
Naphthalene	Yes	Yes	No	2.66E-04	N/A	1.16E-05	N/A	1.16E-05	3.33E+00	No
Acenaphthene	Yes	No	Yes	1.08E-06	N/A	3.43E-08	N/A	3.43E-08	9.10E-05	No
Anthracene	Yes	No	Yes	1.43E-06	N/A	4.57E-08	N/A	4.57E-08	9.10E-05	No
Benzo(a)anthracene	Yes	No	Yes	1.14E-06	N/A	3.43E-08	N/A	3.43E-08	2.00E-06	No
Benzo(g,h,i)perylene	Yes	No	Yes	6.04E-07	N/A	2.29E-08	N/A	2.29E-08	9.10E-05	No
Chrysene	Yes	No	Yes	8.11E-07	N/A	3.43E-08	N/A	3.43E-08	2.00E-06	No
Fluoranthene	Yes	No	Yes	3.09E-06	N/A	5.71E-08	N/A	5.71E-08	9.10E-05	No
Fluorene	Yes	No	Yes	8.37E-06	N/A	5.33E-08	N/A	5.33E-08	9.10E-05	No
Indeno(1,2,3-cd)pyrene	Yes	No	Yes	8.16E-07	N/A	3.43E-08	N/A	3.43E-08	2.00E-06	No
Phenanthrene	Yes	No	Yes	1.41E-05	N/A	3.24E-07	N/A	3.24E-07	9.10E-05	No
Pentane	No	Yes	No	--	1.89E-01	4.95E-02	--	2.39E-01	1.18E+02	No
Pyrene	Yes	No	Yes	3.19E-06	N/A	9.52E-08	N/A	9.52E-08	9.10E-05	No
Arsenic	Yes	No	Yes	8.04E-05	N/A	3.81E-06	N/A	3.81E-06	1.50E-06	**Yes**
Barium	No	Yes	No	--	3.20E-04	8.38E-05	--	4.04E-04	3.30E-02	No
Beryllium	Yes	No	Yes	4.82E-06	N/A	2.29E-07	N/A	2.29E-07	2.80E-05	No
Cadmium	Yes	No	Yes	4.42E-04	N/A	2.10E-05	N/A	2.10E-05	3.70E-06	**Yes**
Chromium	Yes	Yes	Yes	5.63E-04	N/A	2.67E-05	N/A	2.67E-05	3.30E-02	No
Cobalt	Yes	Yes	No	3.38E-05	N/A	1.60E-06	N/A	1.60E-06	3.30E-03	No
Copper	No	Yes	No	--	6.18E-05	1.62E-05	--	7.80E-05	6.70E-02	No
Lead	Yes	No	No	2.01E-04	N/A	--	N/A	--	N/A	No
Manganese	Yes	Yes	No	1.53E-04	N/A	7.24E-06	N/A	7.24E-06	3.33E-01	No
Mercury	Yes	No	No	1.05E-04	N/A	--	N/A	--	N/A	No
Molybdenum	No	Yes	No	--	8.00E-05	2.10E-05	--	1.01E-04	3.33E-01	No
Nickel	Yes	No	Yes	8.44E-04	N/A	4.00E-05	N/A	4.00E-05	2.70E-05	**Yes**
Selenium	Yes	Yes	No	9.65E-06	N/A	4.57E-07	N/A	4.57E-07	1.30E-02	No
Vanadium	No	Yes	No	--	1.67E-04	4.38E-05	--	2.11E-04	3.00E-03	No
7-PAH	Yes	No	Yes	5.43E-06	N/A	2.17E-07	N/A	2.17E-07	2.00E-06	No
POM	Yes	No	Yes	5.61E-05	N/A	1.68E-06	N/A	1.68E-06	9.10E-05	No
Xylene	Yes	Yes	No	7.07E-05	N/A	--	N/A	--	N/A	No
1,3-Butadiene	Yes	No	Yes	9.70E-06	N/A	--	N/A	--	N/A	No
Acetaldehyde	Yes	No	Yes	1.90E-04	N/A	--	N/A	--	N/A	No
Acrolein	Yes	Yes	No	2.29E-05	N/A	--	N/A	--	N/A	No

[1] Boilers and Emergency Generator TAP emission rates included only for TAPs that are not HAPs. Per IDAPA 58.01.01.210.20, sources covered by 40 CFR Part 60 Regulations do not count TAPs that are HAPs as part of the project emissions increase for comparison to ELs. The boilers are covered by NSPS Subpart Dc and emergency generator by NSPS Subpart IIII.

[2] Boilers and dryer burner have potential operation of 8,760 hours per year, therefore short-term maximum emission rates are used for both §585 and §586 TAPs

[3] Emergency generator has potential operations of 100 hours per year, therefore 24-hr and annual averaged lb/hr emission rates would differ. However, this is irrelevant because no applicable TAPs emissions are compared to ELs.

[4] ELs as contained in IDAPA 58.01.01.585 and §586

Table A1.a. Site-Wide Total Potential-To-Emit

Source	PM10	PM2.5	SO2	NOx	CO	VOC	Lead	Individual HAP: Hexane	Total HAP
	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	**lb/hr**	**lb/hr**
Boilers and Burners	0.21	0.21	0.06	4.52	4.22	0.40	4.59E-05	0.17	0.17
Baghouses/Dust Collectors	2.67	2.67	--	--	--	--	--	--	--
Emergency Generator	0.04	0.04	0.01	9.77	1.38	0.04	--	--	0.02
Total	2.93	2.93	0.06	14.29	5.60	0.44	4.59E-05	0.17	0.19

Source	PM10	PM2.5	SO2	NOx	CO	VOC	Lead	Individual HAP: Hexane	Total HAP
	tpy	**tpy**	**tpy**	**tpy**	**tpy**	**tpy**	**tpy**	**tpy**	**tpy**
Boilers and Burners	0.93	0.93	0.24	19.81	18.47	1.73	2.01E-04	0.72	0.76
Baghouses/Dust Collectors	11.69	11.69	--	--	--	--	--	--	--
Emergency Generator	0.00	0.00	0.00	0.49	0.07	0.00	--	--	0.001
Total	12.63	12.63	0.24	20.30	18.54	1.73	2.01E-04	0.72	0.76

Table A1.b Site-Wide HAP/TAP PTE and Modeling Applicability

Pollutant	HAP?	Non-Carcinogenic TAP?	Carcinogenic TAP?	HAPs	TAPs				EL[4]	Above EL?
				Site-Wide	Boilers[1,2]	Dryer Burner[2]	Emergency Generator[1,3]	Site-Wide		
				(tpy)	(lb/hr)				(lb/hr)	
Benzene	Yes	No	Yes	1.08E-03	N/A	4.00E-05	N/A	4.00E-05	8.00E-04	No
Formaldehyde	Yes	No	Yes	3.04E-02	N/A	1.43E-03	N/A	1.43E-03	5.10E-04	**Yes**
Toluene	Yes	Yes	No	1.47E-03	N/A	6.48E-05	N/A	6.48E-05	2.50E+01	No
2-Methylnaphthalene	Yes	No	Yes	9.65E-06	N/A	4.57E-07	N/A	4.57E-07	9.10E-05	No
3-Methylchloranthrene	Yes	No	Yes	7.23E-07	N/A	3.43E-08	N/A	3.43E-08	9.10E-05	No
7,12-Dimethylbenz(a)anthracene	Yes	No	Yes	6.43E-06	N/A	3.05E-07	N/A	3.05E-07	9.10E-05	No
Acenaphthylene	Yes	No	Yes	1.98E-06	N/A	3.43E-08	N/A	3.43E-08	9.10E-05	No
Benzo(a)pyrene	Yes	No	Yes	5.29E-07	N/A	2.29E-08	N/A	2.29E-08	2.00E-06	No
Benzo(b)fluoranthene	Yes	No	Yes	7.48E-07	N/A	3.43E-08	N/A	3.43E-08	2.00E-06	No
Benzo(k)fluoranthene	Yes	No	Yes	7.62E-07	N/A	3.43E-08	N/A	3.43E-08	2.00E-06	No
Dibenzo(a,h)anthracene	Yes	No	Yes	6.27E-07	N/A	2.29E-08	N/A	2.29E-08	2.00E-06	No
Dichlorobenzene	Yes	Yes	No	4.82E-04	N/A	2.29E-05	N/A	2.29E-05	3.00E+01	No
Hexane	Yes	Yes	No	7.23E-01	N/A	3.43E-02	N/A	3.43E-02	1.20E+01	No
Naphthalene	Yes	Yes	No	2.66E-04	N/A	1.16E-05	N/A	1.16E-05	3.33E+00	No
Acenaphthene	Yes	No	Yes	1.08E-06	N/A	3.43E-08	N/A	3.43E-08	9.10E-05	No
Anthracene	Yes	No	Yes	1.43E-06	N/A	4.57E-08	N/A	4.57E-08	9.10E-05	No
Benzo(a)anthracene	Yes	No	Yes	1.14E-06	N/A	3.43E-08	N/A	3.43E-08	2.00E-06	No
Benzo(g,h,i)perylene	Yes	No	Yes	6.04E-07	N/A	2.29E-08	N/A	2.29E-08	9.10E-05	No
Chrysene	Yes	No	Yes	8.11E-07	N/A	3.43E-08	N/A	3.43E-08	2.00E-06	No
Fluoranthene	Yes	No	Yes	3.09E-06	N/A	5.71E-08	N/A	5.71E-08	9.10E-05	No
Fluorene	Yes	No	Yes	8.37E-06	N/A	5.33E-08	N/A	5.33E-08	9.10E-05	No
Indeno(1,2,3-cd)pyrene	Yes	No	Yes	8.16E-07	N/A	3.43E-08	N/A	3.43E-08	2.00E-06	No
Phenanthrene	Yes	No	Yes	1.41E-05	N/A	3.24E-07	N/A	3.24E-07	9.10E-05	No
Pyrene	Yes	No	Yes	3.19E-06	N/A	9.52E-08	N/A	9.52E-08	9.10E-05	No
Arsenic	Yes	No	Yes	8.04E-05	N/A	3.81E-06	N/A	3.81E-06	1.50E-06	**Yes**
Beryllium	Yes	No	Yes	4.82E-06	N/A	2.29E-07	N/A	2.29E-07	2.80E-05	No
Cadmium	Yes	No	Yes	4.42E-04	N/A	2.10E-05	N/A	2.10E-05	3.70E-06	**Yes**
Chromium	Yes	Yes	Yes	5.63E-04	N/A	2.67E-05	N/A	2.67E-05	3.30E-02	No
Cobalt	Yes	Yes	No	3.38E-05	N/A	1.60E-06	N/A	1.60E-06	3.30E-03	No
Lead	Yes	No	No	2.01E-04	N/A	--	N/A	--	N/A	No
Manganese	Yes	Yes	No	1.53E-04	N/A	7.24E-06	N/A	7.24E-06	3.33E-01	No
Mercury	Yes	No	No	1.05E-04	N/A	--	N/A	--	N/A	No
Nickel	Yes	No	Yes	8.44E-04	N/A	4.00E-05	N/A	4.00E-05	2.70E-05	**Yes**
Selenium	Yes	Yes	No	9.65E-06	N/A	4.57E-07	N/A	4.57E-07	1.30E-02	No
7-PAH	Yes	No	Yes	5.43E-06	N/A	2.17E-07	N/A	2.17E-07	2.00E-06	No
POM	Yes	No	Yes	5.61E-05	N/A	1.68E-06	N/A	1.68E-06	9.10E-05	No
Xylene	Yes	Yes	No	7.07E-05	N/A	--	N/A	--	N/A	No
1,3-Butadiene	Yes	No	Yes	9.70E-06	N/A	--	N/A	--	N/A	No
Acetaldehyde	Yes	No	Yes	1.90E-04	N/A	--	N/A	--	N/A	No
Acrolein	Yes	Yes	No	2.29E-05	N/A	--	N/A	--	N/A	No
Total				0.76						

[1] Boilers and Emergency Generator TAP emission rates included only for TAPs that are not HAPs. Per IDAPA 58.01.01.210.20, sources covered by 40 CFR Part 60 Regulations do not count TAPs that are HAPs as part of the project emissions increase for comparison to ELs. The boilers are covered by NSPS Subpart Dc and emergency generator by NSPS Subpart IIII.

[2] Boilers and dryer burner have potential operation of 8,760 hours per year, therefore short-term maximum emission rates are used for both §585 and §586 TAPs

[3] Emergency generator has potential operations of 100 hours per year, therefore 24-hr and annual averaged lb/hr emission rates would differ. However, this is irrelevant because no applicable TAPs emissions are compared to ELs.

[4] ELs as contained in IDAPA 58.01.01.585 and §586

Table A2.a. Boiler 1 Criteria Pollutant and GHG Potential Emissions

Fuel	Natural Gas	
Hours of Operation	8,760	(hr/yr)
Heat Input Capacity	36.4	(MMBtu/hr)
Fuel Heat Value[1]	1000	(Btu/scf)
Heat Input Capacity	0.0364	(MMscf/hr)

Pollutant	NG Combustion Emission Factor (lb/MMscf)		Potential Emissions		
	Johnston Boiler[1]	AP-42[2]	(lb/hr)	(tpy)	lb/day
PM_{10}	1.0	NA	0.04	0.16	0.87
$PM_{2.5}$	1.0	NA	0.04	0.16	
CO	36	NA	1.31	5.7	
NO_X	36	NA	1.31	5.7	
SO_2	--	0.6	0.02	0.096	
VOC	4.0	NA	0.15	0.64	
Lead	--	0.0005	1.82E-05	7.96E-05	
CH_4	--	2.3	0.08	0.37	
N_2O	--	0.64	0.02	0.10	
CO_2	116,810	NA	4247	18,603	
CO_2e[3]	--	NA	4,256	18,642	

[1] Johnston Boiler efficiency report 2/15/2021. Fuel heat value determined by ratio of boiler rated natural gas Btu/hr and ft^3/hr. $PM_{2.5}$ assumed equal to PM_{10}.

[2] Emission factors shown for pollutants not specified in Johnston Boiler specification. Factors from AP-42 Section 1.4 Natural Gas Combustion, Table 1.4-1 and 1.4-2. N2O factor based on low-NOx burners.

[3] CO_2e assumes a Global Warming Potential per Table A-1 to Subpart A of 40 CFR Part 98: CO_2 = 1, NH_4 = 25, N_2O = 298

Table A2.b. Boiler 2 Criteria Pollutant and GHG Potential Emissions

Fuel	Natural Gas	
Hours of Operation	8,760	(hr/yr)
Heat Input Capacity	36.4	(MMBtu/hr)
Fuel Heat Value	1000	(Btu/scf)
Heat Input Capacity	0.0364	(MMscf/hr)

Pollutant	NG Combustion Emission Factor (lb/MMscf)		Potential Emissions	
	Johnston Boiler[1]	AP-42[2]	(lb/hr)	(tpy)
PM_{10}	1.0	NA	0.04	0.16
$PM_{2.5}$	1.0	NA	0.04	0.16
CO	36	NA	1.31	5.7
NO_X	36	NA	1.31	5.7
SO_2	--	0.6	0.02	0.096
VOC	4.0	NA	0.15	0.64
Lead	--	0.0005	1.82E-05	7.96E-05
CH_4	--	2.3	0.08	0.37
N_2O	--	0.64	0.02	0.10
CO_2	116,810	NA	4247	18,603
CO_2e[3]	--	NA	4,256	18,642

[1] Johnston Boiler efficiency report 2/15/2021. Fuel heat value determined by ratio of boiler rated natural gas Btu/hr and ft^3/hr. $PM_{2.5}$ assumed equal to PM_{10}.

[2] Emission factors shown for pollutants not specified in Johnston Boiler specification. Factors from AP-42 Section 1.4 Natural Gas Combustion, Table 1.4-1 and 1.4-2. N2O factor based on low-NOx burners.

[3] CO_2e assumes a Global Warming Potential per Table A-1 to Subpart A of 40 CFR Part 98: CO_2 = 1, NH_4 = 25, N_2O = 298

Table A2.c. Dryer Burner Criteria Pollutant and GHG Potential Emissions

Maximum Heat Input Capacity[1]	20.0 MMBtu/hr
Maximum Heat Input Capacity[1]	0.0190 MMscf/hr
Fuel	Natural Gas
Hours of Operation	8,760 hr/yr

Pollutant	NG Combustion Emission Factor (lb/MMscf)	Emission Factor Source	Potential Emissions[1] (lb/hr)	(tpy)	lb/day
PM_{10}	-	2	0.14	0.61	3.36
$PM_{2.5}$	-	2	0.14	0.61	
CO	84	3	1.60	7.0	
NO_X	100	3	1.90	8.3	
SO_2	0.6	3	0.011	0.050	
VOC	5.5	3	0.10	0.46	
Lead	0.0005	3	9.52E-06	4.17E-05	
CH_4	2.3	3	0.04	0.19	
N_2O	2.2	3	0.04	0.18	
CO_2	120,000	3	2286	10,011	
CO_2e	-	4	2,299	10,071	

[1] Heat input capacity given from DAHMES report 5/14/2021.

[2] Emission factors given from DAHMES report 5/14/2021. Particulate emissions are specified in same DAHMES report in a lb/hr rate. Assumes PM = PM10 = PM2.5.

[3] AP-42 Section 1.4 Natural Gas Combustion, Table 1.4-1 and 1.4-2 converted from lb/MMBtu to lb/MMscf using 1020 btu/scf.

[4] CO_2e assumes a Global Warming Potential per Table A-1 to Subpart A of 40 CFR Part 98: CO_2 = 1, NH_4 = 25, N_2O = 298

Table A.3. Boilers and Burner Potential HAP and TAP Emissions - Combusting Natural Gas

Boiler 1 - Fuel Usage	0.0364	MMscf/hr
Boiler 1 - Hours of Operation Per Year	8,760	hours/year
Boiler 2 - Fuel Usage	0.0364	MMscf/hr
Boiler 2 - Hours of Operation Per Year	8,760	hours/year
Dryer Burner - Fuel Usage	0.0190	MMscf/hr
Dryer Burner - Hours of Operation Per Year	8,760	hours/year

Pollutant	HAP?	Non-Carcinogenic TAP?	Carcinogenic TAP?	Natural Gas Combustion Emission Factor[1]	Boiler 1				Boiler 2				Dryer Burner			
					Potential HAP Emissions		Potential TAP Emissions		Potential HAP Emissions		Potential TAP Emissions		Potential HAP Emissions		Potential TAP Emissions	
				(lb/MMscf)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Benzene	Yes	No	Yes	2.10E-03	7.64E-05	3.34E-04	7.64E-05	3.34E-04	7.64E-05	3.34E-04	7.64E-05	3.34E-04	4.00E-05	1.75E-04	4.00E-05	1.75E-04
Formaldehyde	Yes	No	Yes	7.50E-02	2.73E-03	1.19E-02	2.73E-03	1.19E-02	2.73E-03	1.19E-02	2.73E-03	1.19E-02	1.43E-03	6.26E-03	1.43E-03	6.26E-03
Toluene	Yes	Yes	No	3.40E-03	1.24E-04	5.41E-04	1.24E-04	5.41E-04	1.24E-04	5.41E-04	1.24E-04	5.41E-04	6.48E-05	2.84E-04	6.48E-05	2.84E-04
2-Methylnaphthalene	Yes	No	Yes	2.40E-05	8.73E-07	3.82E-06	8.73E-07	3.82E-06	8.73E-07	3.82E-06	8.73E-07	3.82E-06	4.57E-07	2.00E-06	4.57E-07	2.00E-06
3-Methylchloranthrene	Yes	No	Yes	1.80E-06	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	3.43E-08	1.50E-07	3.43E-08	1.50E-07
7,12-Dimethylbenz(a)anthracene	Yes	No	Yes	1.60E-05	5.82E-07	2.55E-06	5.82E-07	2.55E-06	5.82E-07	2.55E-06	5.82E-07	2.55E-06	3.05E-07	1.33E-06	3.05E-07	1.33E-06
Acenaphthylene	Yes	No	Yes	1.80E-06	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	3.43E-08	1.50E-07	3.43E-08	1.50E-07
Benzo(a)pyrene	Yes	No	Yes	1.20E-06	4.36E-08	1.91E-07	4.36E-08	1.91E-07	4.36E-08	1.91E-07	4.36E-08	1.91E-07	2.29E-08	1.00E-07	2.29E-08	1.00E-07
Benzo(b)fluoranthene	Yes	No	Yes	1.80E-06	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	3.43E-08	1.50E-07	3.43E-08	1.50E-07
Benzo(k)fluoranthene	Yes	No	Yes	1.80E-06	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	3.43E-08	1.50E-07	3.43E-08	1.50E-07
Dibenzo(a,h)anthracene	Yes	No	Yes	1.20E-06	4.36E-08	1.91E-07	4.36E-08	1.91E-07	4.36E-08	1.91E-07	4.36E-08	1.91E-07	2.29E-08	1.00E-07	2.29E-08	1.00E-07
Dichlorobenzene	Yes	Yes	No	1.20E-03	4.36E-05	1.91E-04	4.36E-05	1.91E-04	4.36E-05	1.91E-04	4.36E-05	1.91E-04	2.29E-05	1.00E-04	2.29E-05	1.00E-04
Hexane	Yes	Yes	No	1.80E+00	6.54E-02	2.87E-01	6.54E-02	2.87E-01	6.54E-02	2.87E-01	6.54E-02	2.87E-01	3.43E-02	1.50E-01	3.43E-02	1.50E-01
Naphthalene	Yes	Yes	No	6.10E-04	2.22E-05	9.71E-05	2.22E-05	9.71E-05	2.22E-05	9.71E-05	2.22E-05	9.71E-05	1.16E-05	5.09E-05	1.16E-05	5.09E-05
Acenaphthene	Yes	No	Yes	1.80E-06	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	3.43E-08	1.50E-07	3.43E-08	1.50E-07
Anthracene	Yes	No	Yes	2.40E-06	8.73E-08	3.82E-07	8.73E-08	3.82E-07	8.73E-08	3.82E-07	8.73E-08	3.82E-07	4.57E-08	2.00E-07	4.57E-08	2.00E-07
Benzo(a)anthracene	Yes	No	Yes	1.80E-06	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	3.43E-08	1.50E-07	3.43E-08	1.50E-07
Benzo(g,h,i)perylene	Yes	No	Yes	1.20E-06	4.36E-08	1.91E-07	4.36E-08	1.91E-07	4.36E-08	1.91E-07	4.36E-08	1.91E-07	2.29E-08	1.00E-07	2.29E-08	1.00E-07
Chrysene	Yes	No	Yes	1.80E-06	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	3.43E-08	1.50E-07	3.43E-08	1.50E-07
Fluoranthene	Yes	No	Yes	3.00E-06	1.09E-07	4.78E-07	1.09E-07	4.78E-07	1.09E-07	4.78E-07	1.09E-07	4.78E-07	5.71E-08	2.50E-07	5.71E-08	2.50E-07
Fluorene	Yes	No	Yes	2.80E-06	1.02E-07	4.46E-07	1.02E-07	4.46E-07	1.02E-07	4.46E-07	1.02E-07	4.46E-07	5.33E-08	2.34E-07	5.33E-08	2.34E-07
Indeno(1,2,3-cd)pyrene	Yes	No	Yes	1.80E-06	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	6.54E-08	2.87E-07	3.43E-08	1.50E-07	3.43E-08	1.50E-07
Phenanthrene	Yes	No	Yes	1.70E-05	6.18E-07	2.71E-06	6.18E-07	2.71E-06	6.18E-07	2.71E-06	6.18E-07	2.71E-06	3.24E-07	1.42E-06	3.24E-07	1.42E-06
Pentane	No	Yes	No	2.60E+00	-	-	9.45E-02	4.14E-01	-	-	9.45E-02	4.14E-01	-	-	4.95E-02	2.17E-01
Pyrene	Yes	No	Yes	5.00E-06	1.82E-07	7.96E-07	1.82E-07	7.96E-07	1.82E-07	7.96E-07	1.82E-07	7.96E-07	9.52E-08	4.17E-07	9.52E-08	4.17E-07
Arsenic	Yes	No	Yes	2.00E-04	7.27E-06	3.19E-05	7.27E-06	3.19E-05	7.27E-06	3.19E-05	7.27E-06	3.19E-05	3.81E-06	1.67E-05	3.81E-06	1.67E-05
Barium	No	Yes	No	4.40E-03	-	-	1.60E-04	7.01E-04	-	-	1.60E-04	7.01E-04	-	-	8.38E-05	3.67E-04
Beryllium	Yes	No	Yes	1.20E-05	4.36E-07	1.91E-06	4.36E-07	1.91E-06	4.36E-07	1.91E-06	4.36E-07	1.91E-06	2.29E-07	1.00E-06	2.29E-07	1.00E-06
Cadmium	Yes	No	Yes	1.10E-03	4.00E-05	1.75E-04	4.00E-05	1.75E-04	4.00E-05	1.75E-04	4.00E-05	1.75E-04	2.10E-05	9.18E-05	2.10E-05	9.18E-05
Chromium	Yes	Yes	Yes	1.40E-03	5.09E-05	2.23E-04	5.09E-05	2.23E-04	5.09E-05	2.23E-04	5.09E-05	2.23E-04	2.67E-05	1.17E-04	2.67E-05	1.17E-04
Cobalt	Yes	Yes	No	8.40E-05	3.05E-06	1.34E-05	3.05E-06	1.34E-05	3.05E-06	1.34E-05	3.05E-06	1.34E-05	1.60E-06	7.01E-06	1.60E-06	7.01E-06
Copper	No	Yes	No	8.50E-04	-	-	3.09E-05	1.35E-04	-	-	3.09E-05	1.35E-04	-	-	1.62E-05	7.09E-05
Lead	Yes	No	No	5.00E-04	1.82E-05	7.96E-05	-	-	1.82E-05	7.96E-05	-	-	9.52E-06	4.17E-05	-	-
Manganese	Yes	Yes	No	3.80E-04	1.38E-05	6.05E-05	1.38E-05	6.05E-05	1.38E-05	6.05E-05	1.38E-05	6.05E-05	7.24E-06	3.17E-05	7.24E-06	3.17E-05
Mercury	Yes	No	No	2.60E-04	9.45E-06	4.14E-05	-	-	9.45E-06	4.14E-05	-	-	4.95E-06	2.17E-05	-	-
Molybdenum	No	Yes	No	1.10E-03	-	-	4.00E-05	1.75E-04	-	-	4.00E-05	1.75E-04	-	-	2.10E-05	9.18E-05
Nickel	Yes	No	Yes	2.10E-03	7.64E-05	3.34E-04	7.64E-05	3.34E-04	7.64E-05	3.34E-04	7.64E-05	3.34E-04	4.00E-05	1.75E-04	4.00E-05	1.75E-04
Selenium	Yes	Yes	No	2.40E-05	8.73E-07	3.82E-06	8.73E-07	3.82E-06	8.73E-07	3.82E-06	8.73E-07	3.82E-06	4.57E-07	2.00E-06	4.57E-07	2.00E-06
Vanadium	No	Yes	No	2.30E-03	-	-	8.36E-05	3.66E-04	-	-	8.36E-05	3.66E-04	-	-	4.38E-05	1.92E-04
7-PAH	Yes	No	Yes	N/A	4.14E-07	1.82E-06	4.14E-07	1.82E-06	4.14E-07	1.82E-06	4.14E-07	1.82E-06	2.17E-07	9.51E-07	2.17E-07	9.51E-07
POM	Yes	No	Yes	N/A	3.21E-06	1.40E-05	3.21E-06	1.40E-05	3.21E-06	1.40E-05	3.21E-06	1.40E-05	1.68E-06	7.36E-06	1.68E-06	7.36E-06

[1] AP-42 Section 1.4 Natural Gas Combustion, Tables 1.4-3 and 1.4-4 (7/98).

Table A4.a. Dust Collectors and Baghouses Potential-To-Emit

Source Description	Annual Operating Hours	PM_{10}[1]		$PM_{2.5}$[1]		PM-2.5/PM-10
		(lb/hr)	(tpy)	(lb/hr)	(tpy)	lb/day
Dryer product collection baghouse	8760	2.63	11.5	2.63	11.5	63.12
Packaging operations dust collector	8760	0.04	0.2	0.04	0.2	0.96

[1] PM_{10} and $PM_{2.5}$ emission rates conservatively set equal to rated PM emission rate.

Table A4.b. Dust Collectors and Baghouses Grain Loading Calculation

Source Description	PM Emission Rate[1]	Flow Rate[1]	Outlet Temperature[1]	Moisture Content[2]	Flow Rate[3]	Grain Loading[3]
	(lb/hr)	(ACFM)	(°F)	(%)	(dscfm)	(gr/dscf)
Dryer product collection baghouse	2.63	43,408	96.1	6.0	38,097	0.0081
Packaging operations dust collector	0.04	812	80.0	1.6	768	0.0061

[1] PM Emission rate, flow rate (ACFM), and outlet temperature provided in 4/14/2021 Dahmes equipment specification.

[2] Moisure content specified by facility engineering estimate.

Dryer baghouse moisture content based on 9.0% relative humidity at 191.9 °F. Saturation pressure of water at 191.9 °F is 9.7362 psi per NIST WebBook Saturation Properties for Water - Temperature Increments.

Packaging baghouse moisture content based on 45% relative humidity at 80 °F. Saturation pressure of water at 80 °F is 0.50747 psi per NIST WebBook Saturation Properties for Water - Temperature Increments.

Moisture Content = Relative Humidity × Saturation Pressure ÷ Ambient Pressure (14.7 psi)

[3] Flow rate (dscfm) and grain loading calculated based on PM emission rate, flow rate (acfm), outlet temperature, and moisture content.

Table A5.a. Emergency Generator Criteria Pollutant and GHG Potential Emissions

Maximum Rated Fuel Flow	36.2 gal/hr
Fuel	ULSD
Hours of Operation per Year	100 hr/yr

Pollutant	Emission Factor (mg/Nm^3)[1]	Emission Factor (lb/gal)[2,3]	Potential Emissions (lb/hr)	Potential Emissions (tpy)	lb/day
PM10	9.5		0.04	0.0022	1.05
PM2.5	9.5		0.04	0.0022	
CO	301.5		1.38	0.1	
NO_X	2129.1		9.77	0.5	
SO_2		2.11E-04	0.01	0.000	
VOC	8.8		0.04	0.00	
CH_4		9.13E-04	0.03	0.00	
N_2O		1.83E-04	0.01	0.00	
CO_2		22.50	814.55	41	
CO_2e			817	41	

[1] Manufacturer supplied emission factors in mg/Nm^3 are used instead of supplied emission factors in g/hp-hr because the rated engine mechanical power is not known (and is higher than the rated electrical power). The rated exhaust flow rate and temperature are used to calculate hourly maximum emissions. Flows and temperature are shown below. Manufaturer emission factors for PM and HC are applied to PM10, PM2.5, and VOC accordingly.

102.1 m^3/min = manufatrurer specified exhaust flow rate

531.1 °C = manufacturer specified exhaust temperature

34.7 Nm^3/min = exhaust flow rate converted to Normal conditions (0° C)

[2] Assumes 100% conversion of fuel sulfur to SO_2. Emission factor is based on 15 ppm sulfur in ULSD (0.0015 wt%) and distillate oil density of 7.05 lb/gal per AP-42 Appendix A.

[3] GHG emission factors based on 40 CFR Part 98 Tables C-1 and C-2. Converted from kg/MMBtu to lb/gal using diesel heating value of 0.138 MMBtu/gal obtained from Part 98 Table C-1.

Table A5.b. Emergency Generator HAP and TAP Potential Emissions[1]

Maximum Rated Fuel Flow	36.2 gal/hr
Fuel	ULSD
Hours of Operation per Year	100 hr/yr

Pollutant	HAP?	Non-Carcinogenic TAP?	Carcinogenic TAP?	Emission Factor (lb/MMBtu)	Potential HAP Emissions (lb/hr)	Potential HAP Emissions (tpy)	Potential TAP Emissions (lb/hr)	Potential TAP Emissions (tpy)
Benzene	**Yes**	**No**	**Yes**	9.33E-04	4.63E-03	2.31E-04	4.63E-03	2.31E-04
Toluene	**Yes**	**Yes**	**No**	4.09E-04	2.03E-03	1.01E-04	2.03E-03	1.01E-04
Xylene	**Yes**	**Yes**	**No**	2.85E-04	1.41E-03	7.07E-05	1.41E-03	7.07E-05
1,3-Butadiene	**Yes**	**No**	**Yes**	3.91E-05	1.94E-04	9.70E-06	1.94E-04	9.70E-06
Formaldehyde	**Yes**	**No**	**Yes**	1.18E-03	5.85E-03	2.93E-04	5.85E-03	2.93E-04
Acetaldehyde	**Yes**	**No**	**Yes**	7.67E-04	3.80E-03	1.90E-04	3.80E-03	1.90E-04
Acrolein	**Yes**	**Yes**	**No**	9.25E-05	4.59E-04	2.29E-05	4.59E-04	2.29E-05
Naphthalene	**Yes**	**Yes**	**No**	8.48E-05	4.21E-04	2.10E-05	4.21E-04	2.10E-05
Acenaphthylene	**Yes**	**No**	**Yes**	5.06E-06	2.51E-05	1.25E-06	2.51E-05	1.25E-06
Acenaphthene	**Yes**	**No**	**Yes**	1.42E-06	7.04E-06	3.52E-07	7.04E-06	3.52E-07
Fluorene	**Yes**	**No**	**Yes**	2.92E-05	1.45E-04	7.24E-06	1.45E-04	7.24E-06
Phenanthrene	**Yes**	**No**	**Yes**	2.94E-05	1.46E-04	7.29E-06	1.46E-04	7.29E-06
Anthracene	**Yes**	**No**	**Yes**	1.87E-06	9.27E-06	4.64E-07	9.27E-06	4.64E-07
Fluoranthene	**Yes**	**No**	**Yes**	7.61E-06	3.77E-05	1.89E-06	3.77E-05	1.89E-06
Pyrene	**Yes**	**No**	**Yes**	4.78E-06	2.37E-05	1.19E-06	2.37E-05	1.19E-06
Benzo(a)anthracene	**Yes**	**No**	**Yes**	1.68E-06	8.33E-06	4.17E-07	8.33E-06	4.17E-07
Chrysene	**Yes**	**No**	**Yes**	3.53E-07	1.75E-06	8.75E-08	1.75E-06	8.75E-08
Benzo(b)fluoranthene	**Yes**	**No**	**Yes**	9.91E-08	4.91E-07	2.46E-08	4.91E-07	2.46E-08
Benzo(k)fluoranthene	**Yes**	**No**	**Yes**	1.55E-07	7.69E-07	3.84E-08	7.69E-07	3.84E-08
Benzo(a)pyrene	**Yes**	**No**	**Yes**	1.88E-07	9.32E-07	4.66E-08	9.32E-07	4.66E-08
Indeno(1,2,3-cd)pyrene	**Yes**	**No**	**Yes**	3.75E-07	1.86E-06	9.30E-08	1.86E-06	9.30E-08
Dibenzo(a,h)anthracene	**Yes**	**No**	**Yes**	5.83E-07	2.89E-06	1.45E-07	2.89E-06	1.45E-07
Benzo(g,h,i)perylene	**Yes**	**No**	**Yes**	4.89E-07	2.43E-06	1.21E-07	2.43E-06	1.21E-07
7-PAH	**Yes**	**No**	**Yes**	N/A	1.70E-05	8.51E-07	1.70E-05	8.51E-07
POM	**Yes**	**No**	**Yes**	N/A	4.13E-04	2.06E-05	4.13E-04	2.06E-05

[1] HAP/TAP emissions are calculated based on emission factors for diesel engines per AP-42 Section 3.3, Table 3.3-2 and Diesel high heat value of 137,000 Btu/gal per AP-42 Appendix A

APPENDIX B – AMBIENT AIR QUALITY IMPACT ANALYSES

M E M O R A N D U M

DATE: December 29, 2021

TO: Shawnee Chen, Permit Writer, Air Program

FROM: Darrin Mehr, Air Quality Dispersion Modeling Analyst, Air Program

PROJECT: P-2008.0050 PROJ 62661 Permit to Construct for the Golden Eagle Cheese Facility located in Burley, Idaho

SUBJECT: Demonstration of Compliance with IDAPA 58.01.01.203.02 (NAAQS) and 203.03 (TAPs) Related to Air Quality Impact Analyses

---

Contents

Acronyms, Units, and Chemical Nomenclature 3

1.0 Summary 5

2.0 Background Information 7

2.1 Project Description 7

2.2 Facility Location and Area Classification 7

2.3 Air Impact Analyses Required for All Permits to Construct 7

2.4 Significant Impact Level and Cumulative NAAQS Impact Analyses 8

2.5 Toxic Air Pollutant Analyses 10

3.0 Analytical Methods and Data 10

3.1 Emission Source Data 10

3.1.1 Modeling Protocol 11

3.1.2 Modeling Applicability and Modeled Criteria Pollutant Emission Rates 11

3.1.3 TAPs Modeling Applicability 14

3.1.4 Emission Release Parameters 15

3.1.5 Emission Release Parameter Justification 16

3.2 Background Concentrations 18

3.3 Impact Modeling Methodology 18

3.3.1 General Overview of Impact Analyses 18

3.3.2 Modeling Methodology 19

3.3.3 Model Selection 19

3.3.4 Meteorological Data 20

3.3.5 Effects of Terrain on Modeled Impacts 21
3.3.6 Facility Layout and Building Downwash 21
3.3.7 NOx Chemistry 22
3.3.8 Ambient Air Boundary 23
3.3.9 Receptor Network 25
3.3.10 Good Engineering Practice Stack Height 27
4.0 SIL, NAAQS and TAPs Impact Modeling Results 28
4.1 Results for NAAQS Analyses 28
4.1.1 Significant Impact Level Analysis 28
4.1.2 Cumulative NAAQS Impact Analysis 28
4.2 Results for TAPs Impact Analyses 34
5.0 Conclusions 34
References 35

Acronyms, Units, and Chemical Nomenclature

AAC	Acceptable Ambient Concentration of a non-carcinogenic TAP
AACC	Acceptable Ambient Concentration of a Carcinogenic TAP
ACFM	Actual cubic feet per minute
AERMAP	The terrain data preprocessor for AERMOD
AERMET	The meteorological data preprocessor for AERMOD
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
Appendix W	40 CFR 51, Appendix W – Guideline on Air Quality Models
ARM	Ambient Ratio Method
ASOS	Automated Surface Observing System
bhp	Brake horsepower
BPIP	Building Profile Input Program
BRC	Below Regulatory Concern
CFR	Code of Federal Regulations
CMAQ	Community Multi-Scale Air Quality Modeling System
CO	Carbon Monoxide
DEQ	Idaho Department of Environmental Quality
EL	Emissions Screening Level of a TAP
EPA	United States Environmental Protection Agency
ft	Feet
ft/sec	Feet per second
GEC	Golden Eagle Cheese (permittee)
GEP	Good Engineering Practice
GPS	Global Positioning System
gram/sec	grams per second
HAP	Hazardous Air Pollutant
hr	Hour
Idaho Air Rules	Rules for the Control of Air Pollution in Idaho, located in the Idaho Administrative Procedures Act 58.01.01
ISCST3	Industrial Source Complex Short Term 3 dispersion model
K	Kelvin
kW	kilowatt
lb/hr	Pounds per hour
m	Meters
m/sec	Meters per second
MACT	Maximum Achievable Control Technology
MERPs	Modeled Emission Rates for Precursors
MMBtu	Million British Thermal Units
MMscf/year	Million standard cubic feet per year
NAAQS	National Ambient Air Quality Standards
NCDC	National Climatic Data Center
NED	National Elevation Dataset
NO	Nitrogen Oxide
NO_2	Nitrogen Dioxide

NOx	Oxides of Nitrogen
NSR	New Source Review
NWS	National Weather Service
O_3	Ozone
Pb	Lead
PM_{10}	Particulate matter with an aerodynamic particle diameter less than or equal to a nominal 10 micrometers
$PM_{2.5}$	Particulate matter with an aerodynamic particle diameter less than or equal to a nominal 2.5 micrometers
ppb	parts per billion
PRIME	Plume Rise Model Enhancement
PSD	Prevention of Significant Deterioration
psig	Pound per square inch gauge
PTC	Permit to Construct
PTE	Potential to Emit
scfm	Standard cubic feet per minute
SCRAM	Support Center for Regulatory Atmospheric Modeling
SIL	Significant Impact Level
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
tons/year	Tons per year
Trinity	Trinity Consultants (project permitting and modeling consultant)
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
VOCs	Volatile Organic Compounds
WGS	World Geodetic System
^oF	Degrees Fahrenheit
$\mu g/m^3$	Micrograms per cubic meter of air

1.0 Summary

4321 Occidental, LLC submitted a Permit to Construct (PTC) application to construct a greenfield facility, located in Burley, Idaho. 4321 Occidental, LLC will operate the facility under the name of "Golden Eagle Cheese" (GEC). GEC will process whole milk into cheese and dried whey products. The project will include:

- Two identical natural gas-fired boilers each with a rated heat input capacity of 36.4 MMBtu/hr.
- One whey dryer equipped with a natural gas-fired dryer burner with a rated heat input capacity of 20 MMBtu/hr.
- One diesel-fired emergency generator engine rated at 580 hp.

Project-specific air quality analyses involving atmospheric dispersion modeling of estimated emissions associated with the facility were submitted to DEQ to demonstrate that applicable emissions do not result in violation of a National Ambient Air Quality Standard (NAAQS) or Toxic Air Pollutant (TAP) increment as required by the Idaho Administrative Procedures Act 58.01.01.203.02 and 203.03 (Idaho Air Rules Section 203.02 and 203.03). This memorandum provides a summary of the applicability assessment for analyses and air impact analyses used to demonstrate compliance with applicable NAAQS and TAP increments, as required by Idaho Air Rules Section 203.02 and 203.03.

Trinity Consultants (Trinity), on behalf of GEC, prepared the PTC application and performed ambient air impact analyses for this project. DEQ review of submitted data and DEQ analyses summarized by this memorandum addressed only the rules, policies, methods, and data pertaining to the air impact analyses used to demonstrate that estimated emissions associated with operation of the facility will not cause or significantly contribute to a violation of any applicable air quality standard. This review did not address/evaluate compliance with other rules or analyses not pertaining to the air impact analyses. Evaluation of emission estimates was the responsibility of the DEQ permit writer and is addressed in the main body of the DEQ Statement of Basis, and emission calculation methods were not evaluated in this modeling review memorandum.

Table 1 presents key assumptions and results to be considered in the development of the permit. Idaho Air Rules require air impact analyses be conducted in accordance with methods outlined in 40 CFR 51, Appendix W *Guideline on Air Quality Models* (Appendix W). Appendix W requires that air quality impacts be assessed using atmospheric dispersion models with emissions and operations representative of design capacity or as limited by a federally enforceable permit condition.

The submitted information and analyses: 1) utilized appropriate methods and models; 2) was conducted using reasonably accurate or conservative model parameters and input data (review of emission estimates was addressed by the DEQ permit writer); 3) adhered to established DEQ guidelines for new source review dispersion modeling; 4) showed either a) that estimated potential/allowable emissions are at a level defined as below regulatory concern (BRC) and do not require a NAAQS compliance demonstration; b) that predicted pollutant concentrations from emissions associated with the project as modeled were below Significant Impact Levels (SILs) or other applicable regulatory thresholds; or c) that predicted pollutant concentrations from emissions associated with the project, when appropriately combined with co-contributing sources and background concentrations, were below applicable NAAQS at ambient air locations where and when the project has a significant impact; 5) showed that TAP emission increases associated with the project will not result in increased ambient air impacts exceeding allowable TAP increments. This conclusion assumes that conditions in Table 1 are representative of facility design capacity or operations as limited by a federally enforceable permit condition. The DEQ permit writer should use Table 1 and other information presented in this memorandum to generate appropriate permit

provisions/restrictions to assure emissions do not exceed applicable regulatory thresholds requiring further analyses and to assure the requirements of Appendix W are met regarding emissions representative of design capacity or permit allowable rates.

Table 1. KEY ASSUMPTIONS USED IN MODELING ANALYSES.

Criteria/Assumption/Result	Explanation/Consideration
General Emission Rates Emission rates used in the air impact analyses, as listed in Table 5 of this memorandum, must represent maximum potential emissions as given by design capacity, inherently limited by the nature of the process or configuration of the facility, or as limited by the issued permit for the specific pollutant and averaging period.	Compliance has not been demonstrated for emission rates greater than those used in the submitted air impact analyses. All emissions sources except the emergency generator engine were modeled at maximum requested hourly emission rates for 8,760 hours per year reflecting rated capacity for the existing emissions units.
Air Impact Analyses for Criteria Pollutant Emissions Short-term and long-term criteria air pollutant emissions increases of Pb and SO_2 are below facility-wide BRC thresholds requiring a NAAQS compliance demonstration. Emissions of CO are below the ¼ SER modeling thresholds. Modeling was required for NO_2, PM_{10}, and $PM_{2.5}$ emissions.	A NAAQS compliance demonstration is required by Idaho Air Rules Section 203.02 for pollutant increases above annual BRC thresholds or ¼ SER thresholds. Project-specific impact analyses are required for pollutants having an emissions increase that is greater than these modeling applicability thresholds.
Dryer Baghouse Stack Release Height The dryer baghouse stack release height must be 115 feet above grade or higher. The stack must exhaust vertically and uninterrupted without a raincap or a horizontal orientation. The stack exit diameter should not exceed 4.63 feet.	Compliance with the 24-hour $PM_{2.5}$ NAAQS was demonstrated with this stack release height. The contribution of the proposed GEC facility to modeled exceedances for the GEC facility, High Desert Milk co-contributing facility, and the ambient background concentration was below the 24-hour $PM_{2.5}$ SIL when applying this height.
Emergency Generator Engine Operation The engine was modeled for 24 hours/day for short-term averaging period standards and 100 hours/year for annual averaging period standards.	No permit condition limiting or monitoring testing and maintenance operations on a 24-hour basis is warranted because unlimited operation was modeled for the 24-hour average PM_{10} and $PM_{2.5}$ NAAQS compliance demonstrations. The 100 hours/year limitation is a standard assumption applied in ambient impact analyses.

Summary of Submittals and Actions

July 1, 2021	DEQ received a permit application and ambient impact analyses files from GEC.
July 2, 2021	Regulatory start date for the application completeness review.
July 30, 2020	DEQ declared the application incomplete.
August 9, 2021	DEQ received a response to the application incompleteness determination from GEC.
September 8, 2021	DEQ declared the application incomplete.
October 7, 2021	DEQ received a response to the incompleteness determination from GEC.
November 3, 2021	DEQ declared the application complete.

2.0 Background Information

This section provides background information applicable to the project and the facility site. It also provides a brief description of the applicable air impact analyses requirements for the project.

2.1 Project Description

GEC's project will include the following emissions units and emission points:

- Two identical natural gas-fired boilers will be installed. Each boiler will have a rated heat input capacity of 36.36 MMBtu/hr and will be equipped with its own exhaust stack.

- One spray dryer for removing water from whole milk will be installed. The dryer is rated at 4.81 tons/hour with 35% total solids that produces whey powder at 1.773 tons/hour at 5% H_2O content. The dryer particulate emissions will be controlled by a dedicated baghouse. The whey dryer is equipped with a 20 MMBtu/hr natural gas-fired heater that will exhaust combustion emissions uncontrolled from a separate stack.

- The facility's product packaging area will be equipped with a baghouse to control particulate matter emissions.

- One diesel-fired emergency generator will be installed to provide backup power. The engine is diesel-fired with rated maximum output of 580 horsepower and the generator unit is rated at 500 kW at full load.

2.2 Facility Location and Area Classification

The GEC facility is located in Burley, within Cassia County with coordinates of 269,200 m Easting; 4,713,550 m Northing; UTM Zone 12 or 42.5400° latitude and -113.8106° longitude). This area is designated as an attainment or unclassifiable area for sulfur dioxide (SO_2), nitrogen dioxide (NO_2), carbon monoxide (CO), lead (Pb), ozone (O_3), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}), and particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers ($PM_{2.5}$). The area is not classified as non-attainment for any criteria pollutants.

2.3 Air Impact Analyses Required for All Permits to Construct

Idaho Air Rules Sections 203.02 and 203.03:

> *No permit to construct shall be granted for a new or modified stationary source unless the applicant shows to the satisfaction of the Department all of the following:*
>
> ***02. NAAQS**. The stationary source or modification would not cause or significantly contribute to a violation of any ambient air quality standard.*
>
> ***03. Toxic Air Pollutants.** Using the methods provided in Section 210, the emissions of toxic air pollutants from the stationary source or modification would not injure or unreasonably affect human or animal life or vegetation as required by Section 161. Compliance with all applicable toxic air pollutant carcinogenic increments and toxic air pollutant non-carcinogenic increments will also demonstrate preconstruction compliance with Section 161 with regards to the pollutants*

listed in Sections 585 and 586.

Atmospheric dispersion modeling, using computerized simulations, is used to demonstrate compliance with both NAAQS and TAPs. Idaho Air Rules Section 202.02 states:

> ***02. Estimates of Ambient Concentrations****. All estimates of ambient concentrations shall be based on the applicable air quality models, data bases, and other requirements specified in 40 CFR 51 Appendix W (Guideline on Air Quality Models).*

2.4 Significant Impact Level and Cumulative NAAQS Impact Analyses

If specific criteria pollutant emission increases associated with the proposed permitting project cannot qualify for a BRC exemption as per Idaho Air Rules Section 221, then the permit cannot be issued unless the application demonstrates that applicable emission increases will not cause or significantly contribute to a violation of NAAQS, as required by Idaho Air Rules Section 203.02.

The first phase of a NAAQS compliance demonstration is to evaluate whether the proposed facility/project could have a significant impact to ambient air. Section 3.1.1 of this memorandum describes the applicability evaluation of Idaho Air Rules Section 203.02. The Significant Impact Level (SIL) analysis for a new facility or proposed modification to a facility involves modeling estimated criteria air pollutant emissions from the facility or modification to determine the potential impacts to ambient air. Air impact analyses are required by Idaho Air Rules to be conducted in accordance with methods outlined in Appendix W. Appendix W requires that facilities be modeled using emissions and operations representative of design capacity or as limited by a federally enforceable permit condition.

A facility or modification is considered to have a significant impact on air quality if maximum modeled impacts to ambient air exceed the established SIL listed in Idaho Air Rules Section 006 (referred to as a "significant contribution" in Idaho Air Rules) or as incorporated by reference as per Idaho Air Rules Section 107.03.b. Table 2 lists the applicable SILs.

Table 2. APPLICABLE REGULATORY LIMITS.

Pollutant	Averaging Period	Significant Impact Levels[a] (µg/m^3)[b]	Regulatory Limit[c] (µg/m^3)	Modeled Design Value Used[d]
PM_{10}[e]	24-hour	5.0	150[f]	Maximum 6th highest[g]
$PM_{2.5}$[h]	24-hour	1.2	35[i]	Mean of maximum 8th highest[j]
	Annual	0.2	12[k]	Mean of maximum 1st highest[l]
Carbon monoxide (CO)	1-hour	2,000	40,000[m]	Maximum 2nd highest[n]
	8-hour	500	10,000[m]	Maximum 2nd highest[n]
Sulfur Dioxide (SO_2)	1-hour	3 ppb[o] (7.8 µg/m^3)	75 ppb[p] (196 µg/m^3)	Mean of maximum 4th highest[q]
	3-hour	25	1,300[m]	Maximum 2nd highest[n]
	24-hour	5	365[m]	Maximum 2nd highest[n]
	Annual	1.0	80[r]	Maximum 1st highest[n]
Nitrogen Dioxide (NO_2)	1-hour	4 ppb (7.5 µg/m^3)	100 ppb[s] (188 µg/m^3)	Mean of maximum 8th highest[t]
	Annual	1.0	100[r]	Maximum 1st highest[n]
Lead (Pb)	3-month[u]	NA	0.15[r]	Maximum 1st highest[n]
	Quarterly	NA	1.5[r]	Maximum 1st highest[n]
Ozone (O_3)	8-hour	40 TPY VOC[v]	70 ppb[w]	Not typically modeled

a. Idaho Air Rules Section 006 (definition for significant contribution) or as incorporated by reference as per Idaho Air Rules Section 107.03.b.
b. Micrograms per cubic meter.
c. Incorporated into Idaho Air Rules by reference, as per Idaho Air Rules Section 107.
d. The maximum 1st highest modeled value is always used for the significant impact analysis unless indicated otherwise. Modeled design values are calculated for each ambient air receptor.
e. Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.
f. Not to be exceeded more than once per year on average over 3 years.
g. Concentration at any modeled receptor when using five years of meteorological data.
h. Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers.
i. 3-year mean of the upper 98th percentile of the annual distribution of 24-hour concentrations.
j. 5-year mean of the 8th highest modeled 24-hour concentrations at the modeled receptor for each year of meteorological data modeled. For the SIL analysis, the 5-year mean of the 1st highest modeled 24-hour impacts at the modeled receptor for each year.
k. 3-year mean of annual concentration.
l. 5-year mean of annual averages at the modeled receptor.
m. Not to be exceeded more than once per year.
n. Concentration at any modeled receptor.
o. Interim SIL established by EPA policy memorandum.
p. 3-year mean of the upper 99th percentile of the annual distribution of maximum daily 1-hour concentrations.
q. 5-year mean of the 4th highest daily 1-hour maximum modeled concentrations for each year of meteorological data modeled. For the significant impact analysis, the 5-year mean of 1st highest modeled 1-hour impacts for each year is used.
r. Not to be exceeded in any calendar year.
s. 3-year mean of the upper 98th percentile of the annual distribution of maximum daily 1-hour concentrations.
t. 5-year mean of the 8th highest daily 1-hour maximum modeled concentrations for each year of meteorological data modeled. For the significant impact analysis, the 5-year mean of maximum modeled 1-hour impacts for each year is used.
u. 3-month rolling average.
v. An annual emissions rate of 40 ton/year of VOCs is considered significant for O_3.
w. Annual 4th highest daily maximum 8-hour concentration averaged over three years.

If modeled maximum pollutant impacts to ambient air from the emission sources associated with a new facility or modification exceed the SILs, then a cumulative NAAQS impact analysis is necessary to demonstrate compliance with NAAQS and Idaho Air Rules Section 203.02.

A cumulative NAAQS impact analysis for attainment area pollutants involves assessing ambient impacts (typically the design values consistent with the form of the standard) from potential/allowable emissions resulting from the project and emissions from any nearby co-contributing sources (including existing emissions from the facility that are unrelated to the project), and then adding a DEQ-approved background concentration value to the modeled result that is appropriate for the criteria pollutant/averaging-period at the facility location and the area of significant impact. The resulting pollutant concentrations in ambient air are then compared to the NAAQS listed in Table 2. Table 2 also specifies the modeled design value that must be used for comparison to the NAAQS. NAAQS compliance is evaluated on a receptor-by-receptor basis for the modeling domain.

If the cumulative NAAQS impact analysis indicates an exceedance of NAAQS, a culpability analysis can determine if this exceedance is due to emissions from the proposed project. The permit may not be issued if the proposed project has a significant contribution (exceeding the SIL) to the modeled violation. If project-specific impacts are below the SIL, then the project does not have a significant contribution to the specific violations.

Compliance with Idaho Air Rules Section 203.02 is generally demonstrated if: a) applicable specific criteria pollutant emission increases are at a level defined as BRC, using the criteria established by DEQ regulatory interpretation[1]; or b) all modeled impacts of the SIL analysis are below the applicable SIL or

other level determined to be inconsequential to NAAQS compliance; or c) modeled design values of the cumulative NAAQS impact analysis (modeling all emissions from the facility and co-contributing sources, and adding a background concentration) are less than applicable NAAQS at receptors where impacts from the proposed facility/modification exceeded the SIL or other identified level of consequence; or d) if the cumulative NAAQS analysis showed NAAQS violations, the impact of proposed facility to any modeled violation was inconsequential (typically assumed to be less than the established SIL) for that specific receptor and for the specific modeled time when the violation occurred.

2.5 Toxic Air Pollutant Analyses

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

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

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

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

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

Idaho Air Rules Section 210.20 states that if TAP emissions from a specific source are regulated by the Department or EPA under 40 CFR 60, 61, or 63, then a TAP impact analysis under Section 210 is not required for that TAP. The DEQ permit writer evaluates the applicability of specific TAPs to the Section 210.20 exclusion.

3.0 Analytical Methods and Data

This section describes the methods and data used in the analyses to demonstrate compliance with applicable air quality impact requirements. The DEQ Statement of Basis provides a discussion of the methods and data used to estimate criteria and TAP emission rates.

3.1 Emission Source Data

Emissions of criteria pollutants and TAPs resulting from operation of the GEC facility were estimated by Trinity for various applicable averaging periods. Emissions from the existing co-contributing HDM

source were established using the final permit-allowable emission rates modeled for the facility's latest permit modification under PTC P-2008.0050, Project 62468, issued March 1, 2021.

The calculation of potential emissions is the responsibility of the DEQ permit writer, and the representativeness and accuracy of emission estimates is not addressed in this modeling memorandum. The DEQ permit writer was not required to review the emission rates for the co-contributing HDM facility. Trinity and DEQ did not refine HDM emission rates to reflect actual emissions that would be based on historical demonstrated achieved operations.

DEQ air impact analysts are responsible for assuring that potential emission rates provided in the emission inventory are properly used in the model. The rates listed must represent the maximum allowable rate as averaged over the specified period.

Emission rates used in the impact modeling applicability analyses and any modeling analyses, as listed in this memorandum, should be reviewed by the DEQ permit writer and compared with those in the final emission inventory. All modeled criteria air pollutant and TAP emission rates must be equal to or greater than the facility's potential emissions calculated in the PTC emission inventory or proposed permit allowable emission rates.

3.1.1 Modeling Protocol

A modeling protocol was not submitted to DEQ for this project. The air impact modeling analyses were generally conducted using data and methods prescribed by the *Idaho Modeling Guideline.*[1]

3.1.2 Modeling Applicability and Modeled Criteria Pollutant Emission Rates

If a project would qualify for a BRC permit exemption as per Idaho Air Rules Section 221 if it were not for potential emissions of one or more pollutants exceeding the BRC threshold of 10 percent of emissions defined by Idaho Air Rules as "significant," then a NAAQS compliance demonstration may not be required for those pollutants with emissions below BRC levels. DEQ's regulatory interpretation policy of exemption provisions of Idaho Air Rules Section 221.01 is that: "A DEQ NAAQS compliance assertion will not be made by the DEQ modeling group for specific criteria pollutants having a project emissions increase below BRC levels, provided the proposed project would have qualified for a Category I Exemption for BRC emissions quantities except for the emissions of another criteria pollutant[1]." The interpretation policy also states that the exemption criteria of uncontrolled potential to emit (PTE) not to exceed 100 ton/year (Idaho Air Rules Section 220.01.a.i) is not applicable when evaluating whether a NAAQS impact analysis is required. A permit will be issued limiting PTE below 100 ton/year, thereby negating the need to maintain calculated uncontrolled PTE under 100 ton/year.

The BRC exemption cannot generally be used to exempt a project from a pollutant-specific NAAQS compliance demonstration where a PTC is required for the action regardless of emission quantities, such as the modification of an existing emission or throughput limit. However, in this instance, if post-project facility-wide emissions of the criteria pollutant are also below BRC thresholds, then a NAAQS compliance demonstration is not required.

A NAAQS compliance demonstration must be performed for pollutant increases that would not qualify for the BRC exemption from the requirement to demonstrate compliance with NAAQS. DEQ recently revised emission *de minimis* threshold levels[2], below which project-specific air impact modeling is not necessary to confidently demonstrate NAAQS compliance. Revised thresholds are a function of the Significant Emission Rates (SERs) defined in Idaho Air Rules Section 005.108. The SERs are expressed

as annual emission rates. To use SERs for NAAQS with short-term averaging periods, the SER is divided by 8,760 hours/year and compared to maximum hourly emissions for 1-hour standards or maximum daily emissions divided by 24 for 24-hour standards.

DEQ also developed SIL thresholds for modification projects where facility-wide emissions exceed SER-based thresholds; emissions less than these rates are reasonably assured to have impacts less than the applicable SIL. SIL thresholds were developed by DEQ using dispersion modeling analyses of a generic facility with one point source. If emissions from affected units/processes exceed SIL modeling thresholds, then air impact modeling is required for permitting.

Table 3 summarizes applicability to NAAQS compliance demonstration requirements and project-specific air impact modeling analyses. The modeling applicability threshold for a new facility is established as the $1/4^{th}$ of the SER (or $1/4^{th}$ of the SER divided by 8,760 hour/year for NAAQS with an averaging period less than annual), and these thresholds will be applied to the GEC project.

Table 3. APPLICABILITY OF NAAQS COMPLIANCE DEMONSTRATION REQUIREMENTS AND PROJECT-SPECIFIC AIR IMPACT MODELING ANALYSES

Pollutant and Averaging Period	BRC Exemption from NAAQS Compliance Demonstration			Project-Specific Impact Analysis Applicability		
	Annual PTE for Permit Applicability[a] (tons/year)	BRC Level[b] (tons/year)	NAAQS Compliance Demonstration Required?	Total Project Emission Increase	Modeling Threshold (SER/4)[c]	Project-Specific Modeling Required?
PM_{10} 24-hour	12.6	1.5	Yes	2.93 lb/hour	0.86 lb/hour	Yes
$PM_{2.5}$ 24-hour	12.6	1.0	Yes	2.93 lb/hour	0.57 lb/hour	Yes
$PM_{2.5}$ annual		1.0	Yes	12.6 tons/year	2.5 tons/year	Yes
NO_2 1-hour	20.3	4.0	Yes	14.29 lb/hour[d]	2.28 lb/hour	Yes
NO_2 annual				19.94 ton/year	10 ton/year	Yes
SO_2 1-hour	0.2	4.0	No	NA	2.28 lb/hour	No
SO_2 3-hour				NA	2.28 lb/hour	No
CO 1- hour	18.5	10	Yes	5.6	5.7 lb/hour (84 lb/hour SIL-based)[e]	No
CO 8-hour	18.5	10	Yes	5.6	5.7 lb/hour (26 lb/hour SIL-based)[e]	No
O_3 8-hour[f]	1.7	4.0	No	NA	See below[g]	No
Pb 3-month	2.1E-04	0.06	No	NA	24.7 lb/month	No

a. Calculated potential to Emit (PTC) for permit applicability purposes. Fugitive emissions are not considered in the BRC evaluation unless required by federal rule. Note that permit applicability is based only on annual emission rates.
b. Below Regulatory Concern (BRC) thresholds in tons/year.
c. The project-specific air impact modeling threshold for a new facility is $1/4^{th}$ of the Significant Emission Rate (SER). For NAAQS with a 1-hour averaging period, this value is converted to pounds and divided by 8,760 hour/year to generate a pound/hour threshold.
d. Maximum hourly emissions including emergency generator engines.
e. SIL-based CO modeling threshold may be used if the ¼ SER threshold is exceeded.
f. VOC emissions are evaluated for ozone impact.
g. See section below on secondary formation from precursor emissions.

Ambient impact analyses are not required for the rolling 3-month average lead standard, 1-hour SO_2 standard, and the 3-hour SO_2 standard based on the emissions remaining below the annual BRC threshold.

Ambient impact modeling analyses are not required for the 1-hour and 8-hour CO standards because proposed project's emission increases are below the modeling thresholds based on 1/4th the SER. Project-specific air impact modeling analyses were required for 1-hour and annual NO_2, 24-hour PM_{10}, 24-hour $PM_{2.5}$, and annual $PM_{2.5}$ because emissions were above the modeling thresholds based on 1/4th the SERs.

Compliance demonstration requirements for secondary formation of ozone and $PM_{2.5}$ due to VOCs, NO_x, and SO_2 precursor emissions are discussed below.

Secondary Formation Ambient Impacts Due to Precursor Emissions

EPA issued final Modeled Emission Rates as Precursors (MERPs) guidance[3] that may be used for Tier 1 compliance demonstrations using default minimum MERP values specific to regions within the U.S. The guidance establishes the applicability criteria and methods to evaluate secondary impacts for this project. EPA has modeled hypothetical sources for secondary formation of $PM_{2.5}$ and ozone, including two new sources in Idaho that are not included in the final MERPs guidance pointed out above. This resource can be accessed at: https://www.epa.gov/scram/merps-view-qlik.

An 8-hour ozone SIL compliance demonstration for secondary formation of ozone from VOCs and/or NO_x precursor emissions is triggered by an emission increase of either pollutant greater than the significant emission rate (SER) of 40 tons/year, as specified in Section 006.108 of the Idaho *Air Rules*. Only ozone precursor(s) with potential annual emissions exceeding the SER are required to be included in the SIL analysis. The project's annual emission increase of NO_x was estimated at 20.3 tons/year and annual emissions increase of VOCs was estimated at listed at 1.7 tons/year. The requested potential annual emission rates of NOx and VOCs are both below the SERs of 40 tons/year for each pollutant. A compliance demonstration for the 8-hour ozone SIL is not required for this project.

Secondary formation of $PM_{2.5}$ is caused by NO_x and SO_2 precursor emissions. The project's emission increases of NO_x and SO_2 precursor emissions were listed in the emission inventory estimated at 20.3 tons/year of NO_x and 0.2 tons/year of SO_2. EPA issued revised draft guidance[4] on ozone and $PM_{2.5}$ modeling on September 20, 2021. The revised guidance requires secondary formation of $PM_{2.5}$ due to NOx and SO_2 precursor emissions to be estimated and added to the predicted impacts attributed to direct emissions of $PM_{2.5}$ regardless of whether either or both precursor emission rates are below the SERs if direct $PM_{2.5}$ emissions exceed the SER of 10 tons/year. Potential direct $PM_{2.5}$ emissions are 12.63 tons/year for this project which exceeds the 10 tons/year SER. DEQ is not requiring GEC to include the secondary impacts for this project because impacts based on a total of 20.5 tons/year of secondary emissions using Tier 1 MERPs hypothetical source impacts will be extremely small and will not affect the compliance status for this project.

Table 4 provides the GEC facility emission rates used in the SIL and cumulative NAAQS analyses. Hourly emissions were modeled reflecting unrestricted operation for short-term and annual averaging periods. The exception to this for the emergency generator engine (model ID EGEN) which was modeled for modeled for 100 hours/year of operation at rated capacity for annual average NO_2 and $PM_{2.5}$ based on 100 hours of emissions averaged evenly over 8,760 hours/year. Trinity applied a conservative approach to the emergency generator engine by modeling this source at full load emissions for 24 hours/day.

Table 4. GOLDEN EAGLE CHEESE SHORT-TERM AND ANNUAL EMISSION RATES FOR THE SIL AND NAAQS ANALYSES				
Emissions Point	**Description**	**24-hour PM_{10} (lb/hr)**	**24-hour and annual $PM_{2.5}$ (lb/hr)**	**1-hour and annual NOx (lb/hr)**
BOI1	Boiler 1 - Johnston	0.036	0.036	1.31
BOI2	Boiler 2 - Johnston	0.036	0.036	1.31
DRYBURN	Natural Gas-fired Dryer Burner Stack	0.14	0.140	1.91
DRYBAG	Dryer Baghouse Stack	2.63	2.627	0
PACKDC	Packaging Area Dust Collector Baghouse	0.040	0.040	0
EGEN	Diesel-fired Emergency Generator Engine	0.044	0.044[a] (24-hour) 4.98E-04[c] (annual)	0[b] (1-hour) 0.11[c] (annual)

a. Maximum hourly emission rate modeled for 24 hours/day.
b. Emergency engines are exempt from modeling for the 1-hour NO_2 SIL and NAAQS per DEQ policy.
c. Hours of operation limited to 100 hours/year spread evenly over 8,760 hours/year.

The GEC facility will be located immediately adjacent to the existing HDM facility. The HDM facility is a source of regulated air pollutants that is under independent operation and ownership from GEC and DEQ determined the emissions of the HDM facility must be included in all cumulative NAAQS analyses for the proposed GEC facility. Table 5 provides HDM emission rates used in the cumulative NAAQS impact analyses. The emission rates represent potential emissions rates modeled by HDM for the current permit issued to the facility—PTC P-2008.0050 Project 62468, issued March 1, 2021. DEQ provided Trinity with the ambient impact modeling analysis model inputs for Project 62468. The ambient impact analyses for GEC's cumulative NAAQS analyses are considered conservative because the analyses are based on permit-allowable potential emissions rather than demonstrated actual emissions.

Table 5. HIGH DESERT MILK CO-CONTRIBUTING SOURCE SHORT-TERM AND ANNUAL EMISSION RATES FOR THE CUMULATIVE NAAQS IMPACT ANALYSES				
Emissions Point	**Description**	**24-hour PM_{10} (lb/hr)**	**24-hour and Annual $PM_{2.5}$ (lb/hr)**	**1-hour and Annual NO_2 (lb/hr)**
HDP104	Boiler 1	0.25	0.25	3.30
HDP105	Boiler 2	0.25	0.25	3.30
HDP102	Powder Handling Baghouse	1.08	1.08	0
HDP101A	Fluid Bed Baghouse	2.30	2.30	0.73
HDP101B	Skim Milk Dryer 1 Baghouse North Stack	2.30	2.30	0.73
HDDRYER2	Skim Milk Dryer 1 Baghouse South Stack	8.81	8.81	0
HDDRY2HT	New Milk Dryer 2	0.20	0.20	1.57
HDPOWDSI	New Dryer 2 Heater	0.0036	0.0036	0
HDP103B	Emergency Generator	0.11	0.11	0
HDGEN	New Powder Silo Baghouse	0.37	0.37 (24-hour) 0.0076 (annual)	0 (1-hour) 0.76 (annual)
HDVACRCV	New Hopper Vacuum Receiver Baghouse	0.0036	0.0036	0

3.1.3 TAPs Modeling Applicability

Table 6 provides a summary of TAP emissions increases for the project for those TAPs with an increase exceeding the ELs of Idaho Air Rules Section 585 or 586. Short-term 24-hour average emission increases of non-carcinogens were below the TAP ELs. Trinity and the DEQ permit writer determined the two natural gas-fired boilers are in a source category regulated by 40 CFR 60 Subpart Dc. The emergency generator engine was determined to be in a source category regulated by 40 CFR 63 Subpart ZZZZ.

Section 210.20 of the Idaho Air Rules exempts these emissions units from potential to emit emission inventory requirements for comparison to screening emission rates (ELs) and ambient impact analyses to demonstrate compliance with allowable increments specified by Sections 585 and 586 of the Idaho Air Rules. The only emission unit subject to pre-construction TAPs compliance is GEC's 20 MMBtu/hr natural gas-fired heater for the Dryer and the emissions listed in Table 6 are attributed to this emissions unit.

Table 6. DRYER HEATER TAP EMISSIONS INCREASES THAT TRIGGER MODELING

Toxic Air Pollutant	Averaging Period	Emissions (lb/hr)	Screening Emissions Level (lb/hr)	Modeling Required?
Arsenic[b]	Annual	3.81E-06	1.5E-06	Yes
Cadmium[b]	Annual	2.10E-05	3.7E-06	Yes
Formaldehyde[b]	Annual	1.43E-03	5.1E-04	Yes
Nickel[b]	Annual	4.00E-05	2.7E-05	Yes

a. Pounds per hour.
b. Carcinogenic TAP. ELs are annual maximum emissions expressed as pounds/hour. The emissions rate is the annual emissions divided by 8,760 hours/year.

3.1.4 Emission Release Parameters

Table 7 lists the emission release parameters, including stack height, exhaust temperature, exhaust velocity, and stack diameter for the modeled point sources in metric units first and in English units below in parentheses.

Table 7. GOLDEN EAGLE CHEESE POINT SOURCE EMISSION RELEASE PARAMETERS IN METRIC UNITS (ENGLISH UNITS IN PARENTHESES)

Model ID	Description	UTM Coordinates NAD83 Datum, Zone 12		Stack Height (m) (ft)	Stack Exhaust Temperature (K) (°F)	Stack Exhaust Velocity (m/s) (fps)	Stack Diameter (m) (ft)	Release Orientation[a]
		Easting-X (m)[b]	Northing-Y (m)					
BOI1	Boiler 1	269,329.3	4,713,530.7	10.97 (36.0)	467.6 (382)	10.49 (34.4)	0.81 (2.66)	Raincap
BOI2	Boiler 2	269,334.3	4,713,530.5	10.97 (36.0)	467.6 (382)	10.49 (34.4)	0.81 (2.66)	Raincap
DRYBURN	Natural Gas-fired Dryer Burner Stack	269,204.4	4,713,563.8	27.74 (91.0)	449.8 (350)	10.62 (34.8)	0.56 (1.84)	Default
DRYBAG	Dryer Baghouse Stack	269,209.6	4,713,555.0	35.05 (115.0)	308.8 (96.2)	13.17 (43.2)	1.41 (4.63)	Default
PACKDC	Packaging Area Dust Collector Baghouse	269,195.9	4,713,542.1	11.89 (39.0)	299.8 (80)	11.81 (38.7)	0.20 (0.66)	Default
EGEN	Diesel-fired Emergency Generator Engine	269,327.1	4,713,507.4	2.13 (7.0)	804.3 (988)	17.13 (56.2)	0.36 (1.18)	Raincap

a. Default release has an uninterrupted vertical release orientation.

Table 8 lists the emission release parameters, including stack height, exhaust temperature, exhaust velocity, and stack diameter for the modeled co-contributing HDM point sources in metric units first and in English units below in parentheses.

Table 8. HIGH DESERT MILK CO-CONTRIBUTING SOURCE POINT SOURCE EMISSION RELEASE PARAMETERS IN METRIC UNITS (ENGLISH UNITS IN PARENTHESES)

Model ID	Description	UTM[a] Coordinates NAD83 datum, Zone 12		Stack Height (m) (ft)[c]	Stack Exhaust Temperature (K)[d] (°F)[e]	Stack Exhaust Velocity (m/s)[f] (fps)[g]	Stack Diameter (m) (ft)	Release Orientation[a]
		Easting-X (m)[b]	Northing-Y (m)					
HDP104	Boiler 1	269,199.0	4,713,401.1	19.8 (65)	449.8 (350)	14.54 (47.7)	0.66 (2.17)	Default
HDP105	Boiler 2	269,204.5	4,713,402.7	19.8 (65)	449.8 (350)	14.54 (47.7)	0.66 (2.17)	Default
HDP103B	Powder Handling Baghouse	269,199.5	4,713,321.2	35.7 (117)	293.2 (68)	0.001 (0.003)	0.001 (0.003)	Raincap
HDP102	Fluid Bed Baghouse	269,202.6	4,713,333.4	37.8 (124)	327.6 (130)	16.79 (55.1)	0.76 (2.50)	Default
HDP101A	Skim Milk Dryer 1 Baghouse North Stack	269,207.0	4,713,347.5	37.2 (122)	350.9 (172)	15.57 (51.1)	1.32 (4.33)	Default
HDP101B	Skim Milk Dryer 1 Baghouse South Stack	269,208.8	4,713,339.8	37.2 (122)	354.8 (179)	15.16 (49.7)	1.32 (4.33)	Default
HDDRYER2	New Milk Dryer 2	269,220.6	4,713,299.9	44.2 (145)	322.0 (120)	11.22 (36.8)	2.34 (7.67)	Default
HDDRY2HT	New Dryer 2 Heater	269,211.7	4,713,305.0	44.8 (147)	426.5 (308)	8.37 (27.5)	1.00 (3.29)	Default
HDGEN	Emergency Generator	269,183.5	4,713,327.2	3.0 (10)	533.2 (500)	0.001 (0.003)	0.001 (0.003)	Horizontal
HDPOWDSI	New Powder Silo Baghouse	269,231.1	4,713,298.1	16.8 (55)	316.5 (110)	1.71 (5.6)	0.15 (0.50)	Default
HDVACRCV	New Hopper Vacuum Receiver Baghouse	269,238.6	4,713,307.4	13.4 (44)	322.0 (120)	0.001 (0.003)	0.001 (0.003)	Horizontal

a. Default is an uninterrupted vertical release orientation.

3.1.5 Emission Release Parameter Justification

Release parameter justification for the co-contributing HDM source was not evaluated for this project. DEQ approved the HDM release parameters in the modeling memorandum supporting issuance of PTC P-2008.0050 Project 62468, issued February 8, 2021.

Release parameter substantiation materials were included in the application for GEC's project. Trinity and GEC submitted a process equipment manufacturer's specification sheet from Dahmes Stainless, Inc. (DSI) to support the modeled release parameters at full production capacity for the whey dryer and the packaging area dust collection and baghouse control system. This information was also listed on the facility plot plan diagram.

Dryer Baghouse (model ID DRYBAG)
Trinity modeled the dryer baghouse stack as an uninterrupted vertical release with a volumetric flow rate of 43,573 ACFM, an exit temperature of 96.2˚F, and a stack diameter of 4.63 feet. These values were

supported by the Dahmes project specification sheet listed values of 43,408 ACFM for the flow rate, 96.2˚F exit temperature, and 55.4 inches (4.62 feet) "stack hydraulic diameter" which is the internal stack diameter.

The final modeled stack release height was 115 feet above grade. Email correspondence between Brian Paulson, GEC, and Hans Kabat, VP of Engineering, DSI, confirmed all release parameters will remain unchanged except the release height will be increased from 100 feet to 115 feet.

Dryer Burner (model ID DRYBURN)
The Dryer Burner stack is a separate stack that exhausts combustion emissions from the 20 MMBtu/hr natural gas-fired burner. The burner provides indirect heat for the dryer.

Trinity modeled the Dryer Burner stack with an uninterrupted vertical release orientation. Trinity modeled the stack volumetric flow rate at 5,542 ACFM, exit diameter at 1.84 feet, and exit temperature at 350˚F. The DSI project specification sheet supported the modeled values with nearly identical values of 5,520 ACFM for the flow rate, 22.0 inches (1.83 feet) diameter, and a 350.0˚F exit temperature.

The modeled stack release height was 91 feet above grade, which matched the stack height listed on the detailed facility plot diagram (Appendix C to the initial application's modeling report).

Packaging Area Dust Collector Baghouse (model ID PACKDC)
Trinity modeled the Packaging Area Baghouse stack with an uninterrupted vertical release orientation. Trinity modeled the stack volumetric flow rate at 786 ACFM, exit diameter at 0.66 feet, and exit temperature at 80 ˚F. The DSI project specification sheet supported the modeled values with nearly identical values of 812 ACFM for the flow rate, 8.0 inches (0.67 feet) diameter, and an 80˚F exit temperature.

The modeled stack release height was 91 feet above grade, which matched the stack height listed on the detailed facility plot diagram.

Boilers 1 and 2 (model IDs BOI1 and BOI2)
The boilers are identical and will exhaust through independent stacks. Each stack will be equipped with a raincap, which inhibits dispersion of the exhaust plumes. The boilers will not be equipped with economizers.

The boilers will be Model PFTX 900-4 units manufactured by Johnston Boiler Company. Each boiler will have a rated capacity of 36.36 MMBtu/hr and will be fired exclusively on natural gas. A manufacturer's specification sheet and an efficiency report dated February 15, 2021, listed heat input capacity while firing on natural gas, calculated volumetric flow rate, and stack exit temperature were submitted to support the modeled release parameters. Trinity modeled 100% load emission rates and release parameters. The calculated volumetric flow rate was listed as 11,532 ACFM, which is supports the modeled flow rate of 11,454 ACFM. The efficiency report listed a 381.97 ˚F exit temperature which matched the modeled value of 382 ˚F. The efficiency report temperature closely matched the 378 ˚F interpolated temperature based on specification sheet data for the same 120 psig operating pressure.

The modeled stack exit diameter of 2.67 feet matched the stack diameter listed in the efficiency report. The modeled stack release height of 36 feet above grade was supported with each stack release height identified as 36 feet on the detailed facility plot diagram.

Emergency Generator Engine (model ID EGEN)
The emergency generator will a Caterpillar Model D500 GC generator set with a Caterpillar Model C15 diesel-fired engine. A manufacturer's specification sheet was submitted to support the modeled release parameters. The specification sheet lists the maximum engine power output at 580 horsepower.

This engine was modeled as a point source with a stack equipped with a raincap, which inhibits vertical momentum buoyancy of the exhaust plume.

The modeled exit temperature of 988˚F and stack exit diameter of 1.17 feet matched the values listed on the manufacturer's specification sheet. The modeled volumetric flow rate of 3,695 ACFM was supported by the manufacturer's specification sheet value of 3,605.5 ACFM. The difference is not significant.

The modeled stack release height of 7 feet above grade matched the height identified on the facility plot plan diagram.

DEQ concluded that the release parameters used in the air impact modeling analyses were adequately substantiated and applied appropriately.

3.2 Background Concentrations

The DEQ-recommended ambient backgrounds for the criteria pollutants modeled for this project are listed in Table 8. The background values were obtained from the current Northwest International Air Quality Environmental Science and Technology Consortium (NW AIRQUEST) background lookup tool, which are based on updated 2014-2017 monitoring and photochemical modeling data with refined interpolation methods to establish values for the Pacific Northwest states. The background lookup tool may be accessed at: https://arcg.is/1jXmHH. The centroid location of the 4 km x 4 km grid cell for the background concentrations is 42.54392˚ latitude, -113.81999˚ longitude.

Table 8. DEQ-RECOMMENDED CRITERIA POLLUTANT AMBIENT BACKGROUNDS

Pollutant	Averaging Period	Background Concentration ($\mu g/m^3$)
PM_{10}[b]	24-hour	76.48
$PM_{2.5}$[c]	24-hour	11.89
	Annual	5.38
NO_2[d]	1-hour	56.56 (30.09 ppb)
	Annual	8.90 (4.73 ppb)

3.3 Impact Modeling Methodology

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

3.3.1 General Overview of Impact Analyses

Trinity performed the project-specific air pollutant emission inventory and air impact analyses that were submitted with the application. The submitted information/analyses demonstrate compliance with applicable air quality standards to DEQ's satisfaction, provided the facility is operated as described in the submitted application and in this memorandum.

Table 9 provides a brief description of parameters used in the modeling analyses.

Table 9. MODELING PARAMETERS.		
Parameter	**Description/Values**	**Documentation/Addition Description**
General Facility Location	Burley, Idaho	The area is an attainment or unclassified area for all criteria pollutants.
Model	AERMOD	AERMOD with the PRIME downwash algorithm, version 19191.
Meteorological Data	Burley airport surface data with Boise upper air data	This is a five-year data set covering 2016-2020. See Section 3.3.4 of this memorandum for additional details of the meteorological data.
Terrain	Considered	A 1/3 arc second National Elevation Dataset (NED) file was acquired from the USGS for the surrounding area. AERMAP version 18081 was used to process terrain elevation data for all buildings and receptors. See Section 3.3.5 for more details.
Building Downwash	Considered	Plume downwash was considered for the structures associated with the facility. BPIP-PRIME was used to evaluate building dimensions for consideration of downwash effects in AERMOD. See Section 3.3.6.
Receptor Grid	**SIL and TAPs Analyses (9,611 receptors)**	
	Grid 1	25-meter spacing along the ambient air boundary.
	Grid 2	25-meter spacing in a 2,00-meter (x) by 2,000-meter (y) rectangular grid centered on the facility.
	Grid 3	50-meter spacing in a 3,000-meter (x) by 3,000-meter (y) rectangular grid centered on Grid 2.
	Grid 4	150-meter spacing in a 4,950-meter (x) by 4,950-meter (y) rectangular grid centered on Grid 3.
	Grid 5	500-meter spacing in a 10,000-meter (x) by 10,000-meter (y) rectangular grid centered on Grid 4.
	NAAQS Analyses - Receptor grids were established using SIL modeling results. Cumulative NAAQS analyses receptor grids included all receptors from the SIL receptor grids where maximum impacts exceeded the SIL values for each pollutant and averaging period.	
	24-hour $PM_{2.5}$ NAAQS Hotspot Receptor Grid – 10-meter spacing in a 400-meter (x) by 400-meter (y) grid following the ambient air boundary of the HDM facility. This grid was overlaid on the receptors where the GEC facility impacts exceeded the SIL using the SIL receptor grids described above.	
	NAAQS Receptor Grid to Determine GEC Impacts on HDM Property – 10-meter spacing within the HDM facility ambient air boundary excluding the GEC facility. 400-meter (x) by 400-meter (y) grid following the ambient air boundary of the HDM facility.	

3.3.2 Modeling Methodology

Project-specific modeling and other required impact analyses were generally conducted using data and methods described in the *Idaho Modeling Guideline*[2].

3.3.3 Model Selection

Idaho Air Rules Section 202.02 requires that estimates of ambient concentrations be based on air quality models specified in Appendix W. The refined, steady-state, multiple-source, Gaussian dispersion model AERMOD was promulgated as the replacement model for ISCST3 in December 2005. AERMOD retains the single straight-line trajectory of ISCST3, but it includes more advanced algorithms to assess turbulent mixing processes in the planetary boundary layer for both convective and stable stratified layers.

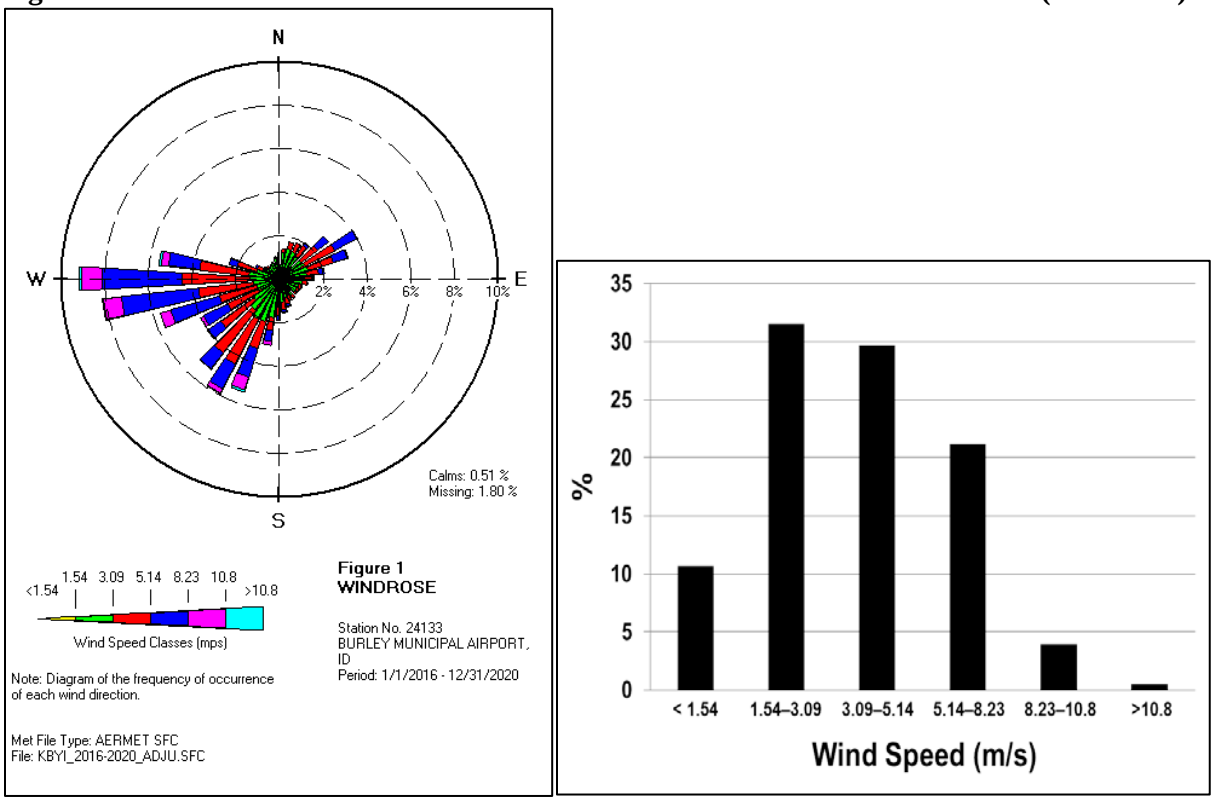
AERMOD version 19191 was used by Trinity for the modeling analyses to evaluate impacts of the facility. AERMOD version 21112 was finalized on April 22, 2021, and was posted to EPA's SCRAM website on May 11, 2021. The ambient impact analyses performed for this project were not affected by any of the changes made to the model. The 1-hour and annual NO_2 analyses used Tier 2 ARM2 with regulatory default minimum and maximum values. DEQ accepted the ambient impact analyses based on AERMOD version 19191.

3.3.4 Meteorological Data

DEQ processed a meteorological dataset from data collected at the Burley airport (KBYI) for a five-year data period covering the years 2016-2020. National Weather Service (Station ID 725867-24133) data and one-minute ASOS data from the Burley NCDC site for 2016-2020 was used for surface meteorological data. Upper air soundings required by AERMET were obtained from the Boise airport station (site ID 24131). Surface characteristics were determined by DEQ staff using AERSURFACE version 20060. DEQ modeling staff evaluated annual moisture conditions for the AERSURFACE runs based on the last 31 years of Burley precipitation data. Conditions were determined to be "wet" for 2016 and 2017, "average" for 2018 and 2019, and "dry" for 2020. Average moisture content is defined as within a 30 percentile of the 31-year mean of 8.49 inches of precipitation. Continuous snow cover was determined to not exist during 2016-2020. Calms were 0.51% of the data, and 1.8 percent of the data were missing from the 5-year record.

Figure 1 shows a wind rose and wind speed histogram of the Burley 2014-2018 data. AERMINUTE version 15272 was used to process Automated Surface Observing Systems (ASOS) wind data for use in AERMET. AERMET version 19191 was used to process surface and upper air data and to generate a model-ready meteorological data input file. The "adjust u star" (ADJ_U*) option was applied in AERMET to enhance model performance during low wind speeds under stable conditions. DEQ provided meteorological data to Trinity, with and without the ADJ_U* option enabled. Stantec used the meteorological data with the ADJ_U* option enabled. DEQ determined that these data are adequately representative of the meteorology at the GEC facility site in Burley, Idaho, for minor source permitting.

Figure 1. BURLEY AIRPORT WIND ROSE AND WIND SPEED HSTOGRAM (2016-2020)



3.3.5 Effects of Terrain on Modeled Impacts

The ambient air impact analyses used terrain data extracted from a United States Geological Survey (USGS) National Elevation Dataset (NED) 1/3 arc second files with approximately 10-meter resolution. The terrain preprocessor AERMAP version 18081 was used by Trinity to extract the elevations from the NED files and assign them to receptors in the modeling domain in a format usable by AERMOD. AERMAP also determined the hill-height scale for each receptor. The hill-height scale is an elevation value based on the surrounding terrain which has the greatest effect on that individual receptor. AERMOD uses those heights to evaluate whether the emission plume has sufficient energy to travel up and over the terrain or if the plume will travel around the terrain.

Terrain in the area the facility is located is relatively flat. Trinity used a site grading elevation of 1,264.0 meters (4,145.9 feet) for all GEC structures and point source stack base elevations.

DEQ agrees the treatment of terrain was appropriate for the ambient impact analyses.

3.3.6 Facility Layout and Building Downwash

DEQ verified proper identification of the site location, emission point locations, and the ambient air boundary by comparing a graphical representation of the modeling input file to the detailed plot plan diagram included in Appendix C of the modeling report in the initial permit application submittal. Lateral dimensions of the structure, locations of exhaust stacks, and stack release heights were clearly documented on the plot plan diagram.

Figure 2 shows the GEC facility structures and emission sources applied in the modeling analyses. Figure 3 depicts 3-dimensional representation of the modeled structures and sources applied in the model setup. Potential downwash effects on emission plumes were accounted for in the model by using building dimensions and locations. Dimensions and orientation of the structures were used as input to the Building Profile Input Program for the Plume Rise Model Enhancements downwash algorithm (BPIP-PRIME version 04274) to calculate direction-specific dimensions and Good Engineering Practice (GEP) stack height information for input to AERMOD. DEQ determined Trinity properly evaluated building downwash effects in the ambient impact analyses.

Figure 2. GOLDEN EAGLE CHEESE FACILITY SOURCE AND STRUCTURE LAYOUT

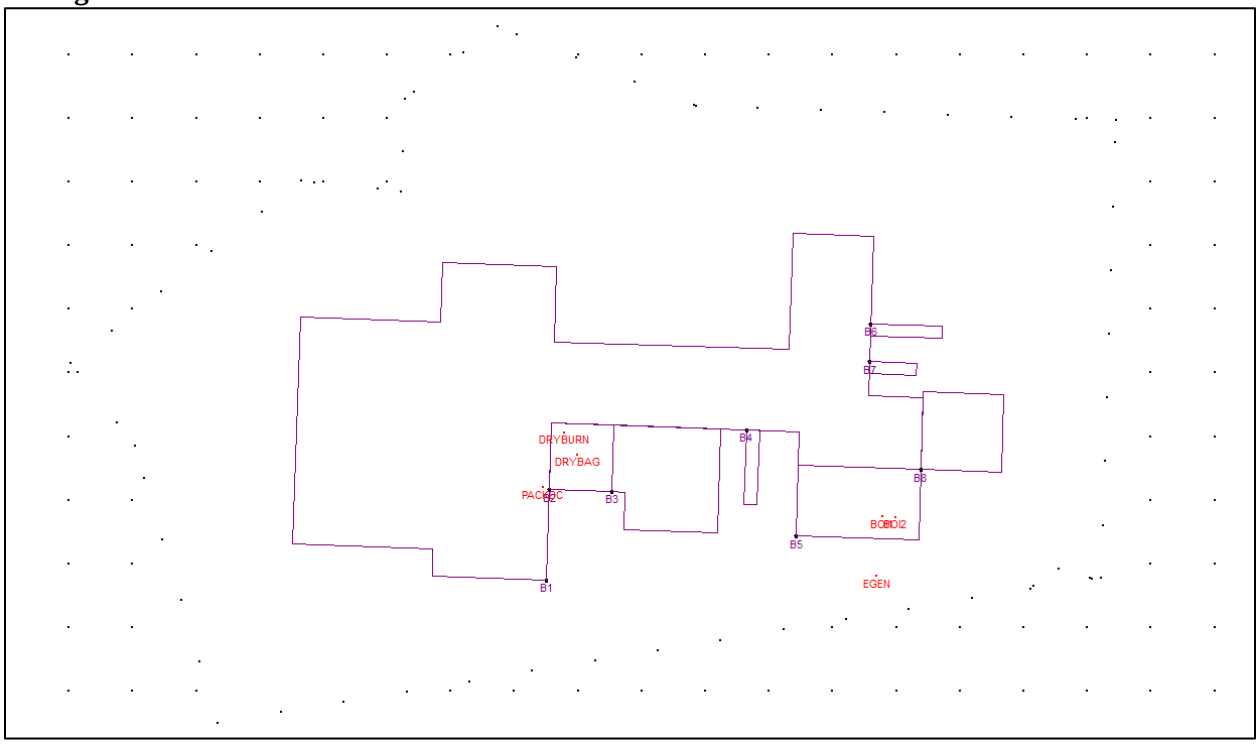
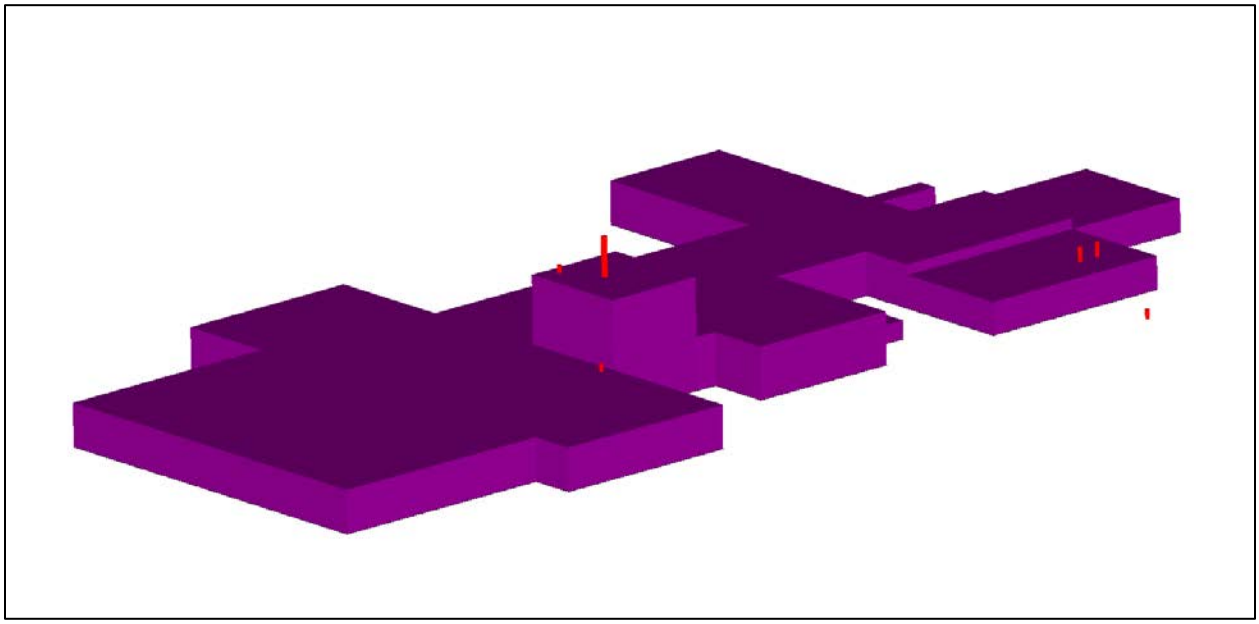


Figure 3 . GOLDEN EAGLE CHEESE 3D VIEW OF FACILITY STRUCTURES VIEWED FROM THE SOUTHWEST



3.3.7 NOx Chemistry

The atmospheric chemistry of NO, NO_2, and O_3 complicates accurate prediction of NO_2 impacts resulting

from NO_x emissions. The conversion of NO to NO_2 can be conservatively addressed using several methods as outlined in a 2014 EPA *NO_2 Modeling Clarification Memorandum*[5]. The guidance outlines a three-tiered approach:

- Tier 1 – assume full conversion of NO to NO_2 where total NOx emissions are modeled and modeled impacts are assumed to be 100 percent NO_2.

- Tier 2 – use an ambient ratio to adjust impacts from the Tier 1 analysis.

- Tier 3 – use a detailed screening method to account for $NO/NO_2/O_3$ chemistry such as the Ozone Limiting Method (OLM) or the Plume Volume Molar Ratio Method (PVMRM).

Trinity used the ARM2 method, a Tier 2 analysis method, which assumes an ambient equilibrium between NO and NO_2, in which the conversion of NO to NO_2 is predicted using hourly ambient NO_x monitoring data. ARM2 has been adopted by the EPA as a default regulatory Tier 2 option. Trinity applied the regulatory default minimum NO_2/NO_x ratio of 0.5 and the regulatory default maximum NO_2/NO_x ratio of 0.9 in the analyses. DEQ review and approval is not required if the regulatory default values are used.

3.3.8 Ambient Air Boundary

Ambient air is defined in Section 006 of the Idaho Air Rules as "that portion of the atmosphere, external to buildings, to which the general public has access." The modeling report stated that the ambient air boundary was established at the facility's property boundary. The property boundary will not be fenced. Posting of no trespassing signs was not included as a method to preclude public access. The methods used to preclude public access, as described by Trinity, will include "constant employee activity throughout the property," and "facility employees will be trained to report any public encroachment onto unauthorized areas and no-trespassing rules will be enforced."

GEC's southern ambient air boundary is immediately adjacent to the HDM facility. The portion of the property where the GEC facility property will be constructed was claimed as exempt from ambient air by HDM in PTC Project P-2008.0050 Project 62468. GEC's property line perimeter was established at the boundary lines of property parcel RP10S23E197804, per the Cassia County Assessors Office parcel map data. This property parcel is registered to High Desert Milk, Inc. HDM's existing facility was treated as ambient air for GEC. The modeled ambient air boundary for the GEC facility after exporting to Google Earth is shown in Figure 4. The ambient air boundary depicted in Figure 4 was used in the SIL, TAPs, and GEC emissions-only scenario analyses to assess GEC's impacts on the neighboring HDM property.

The ambient air boundary used for the cumulative NAAQS analyses, which included both GEC and HDM emissions is shown by the yellow outline in Figure 5.

DEQ determined the methods used to preclude public access to the areas not treated as ambient air are acceptable, as per Section 6.5 of the *Idaho Modeling Guideline*[2].

Figure 4. GOLDEN EAGLE CHEESE FACILITY AMBIENT AIR BOUNDARY

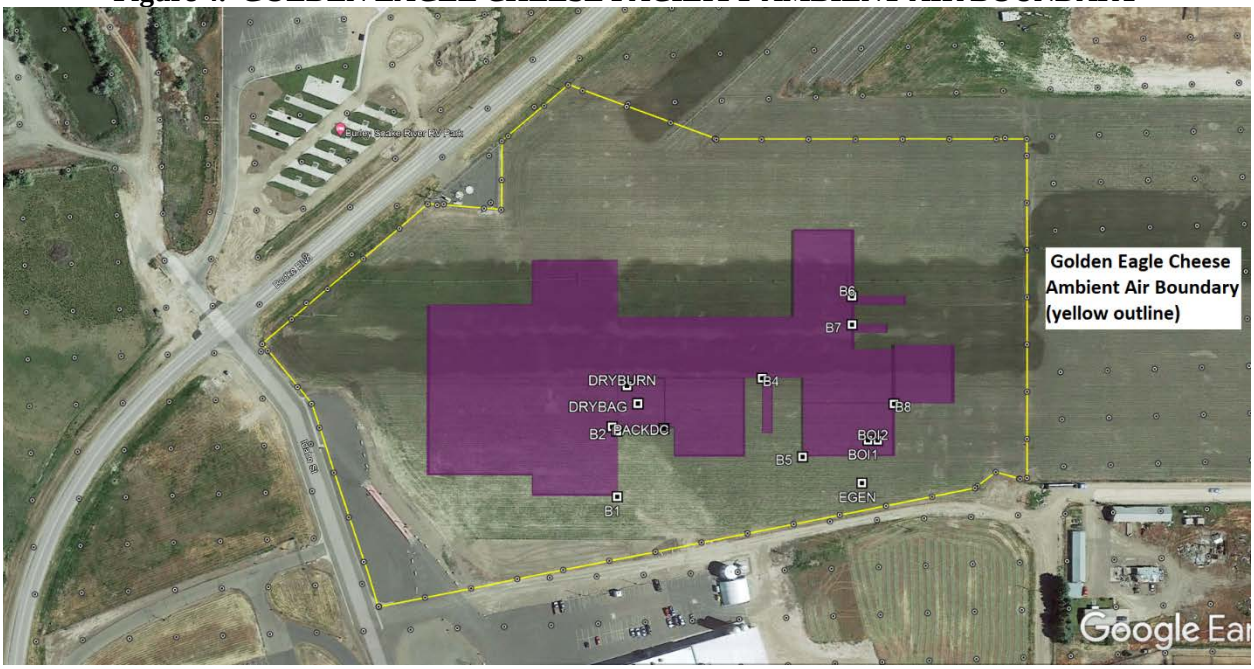
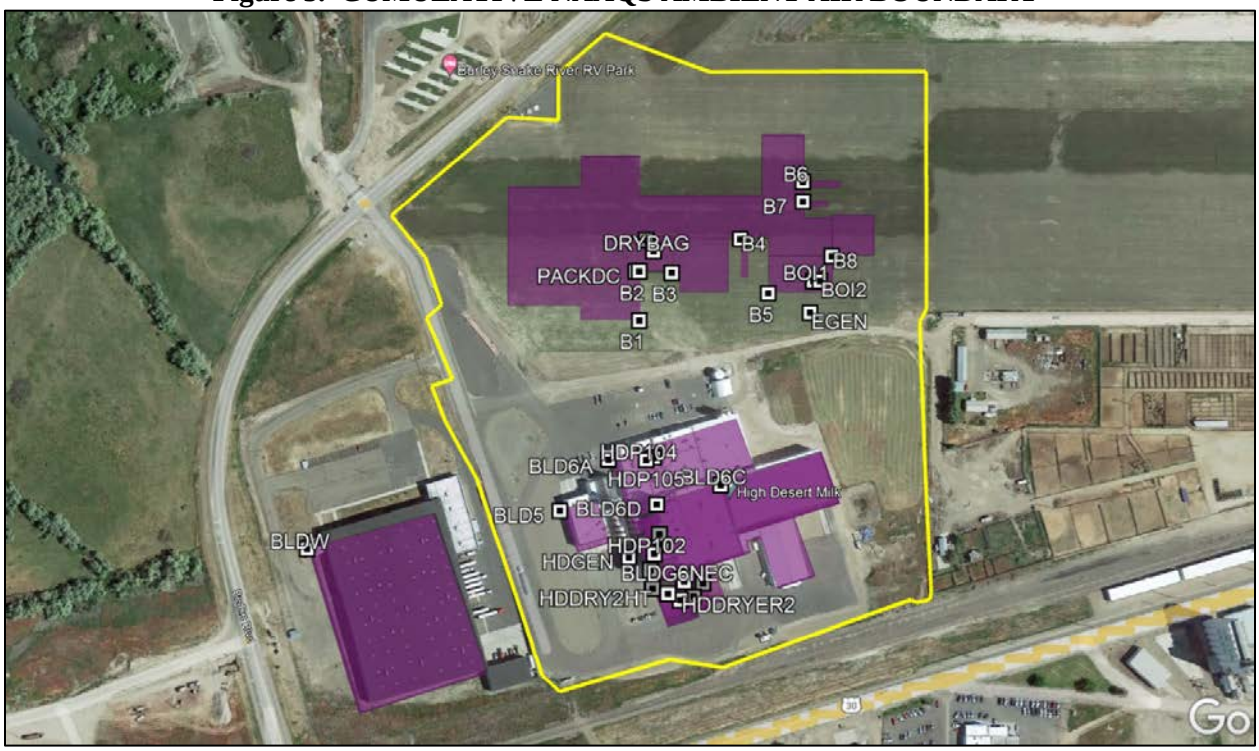


Figure 5. CUMULATIVE NAAQS AMBIENT AIR BOUNDARY



3.3.9 Receptor Network

Table 8 describes the receptor network used in the submitted modeling analyses. Figures 6 and 7 depict the receptor grids applied in the SIL and TAPs modeling analyses. Receptor grids for all cumulative NAAQS demonstrations included receptors where the SIL was exceeded.

The receptor grid used to resolve the maximum impacts for the 24-hour $PM_{2.5}$ cumulative NAAQS analyses is shown in Figure 8. All receptor locations where the combined impacts for the GEC facility, HDM facility, and ambient background concentration were predicted to exceed the 24-hour $PM_{2.5}$ NAAQS were located within the 10-meter high resolution hot spot grid.

The 10-meter resolution receptor grid used to evaluate the ambient impacts attributed to GEC's facility-wide emissions only on the adjacent HDM property for all NAAQS demonstrations is shown in Figure 9.

The receptor grids used met the minimum recommendations specified in the *Idaho Modeling Guideline*[2] and were effective in reasonably assuring compliance with applicable air quality standards at all ambient air locations.

Figure 6. FULL SIL AND TAPs RECEPTOR GRID COVERAGE

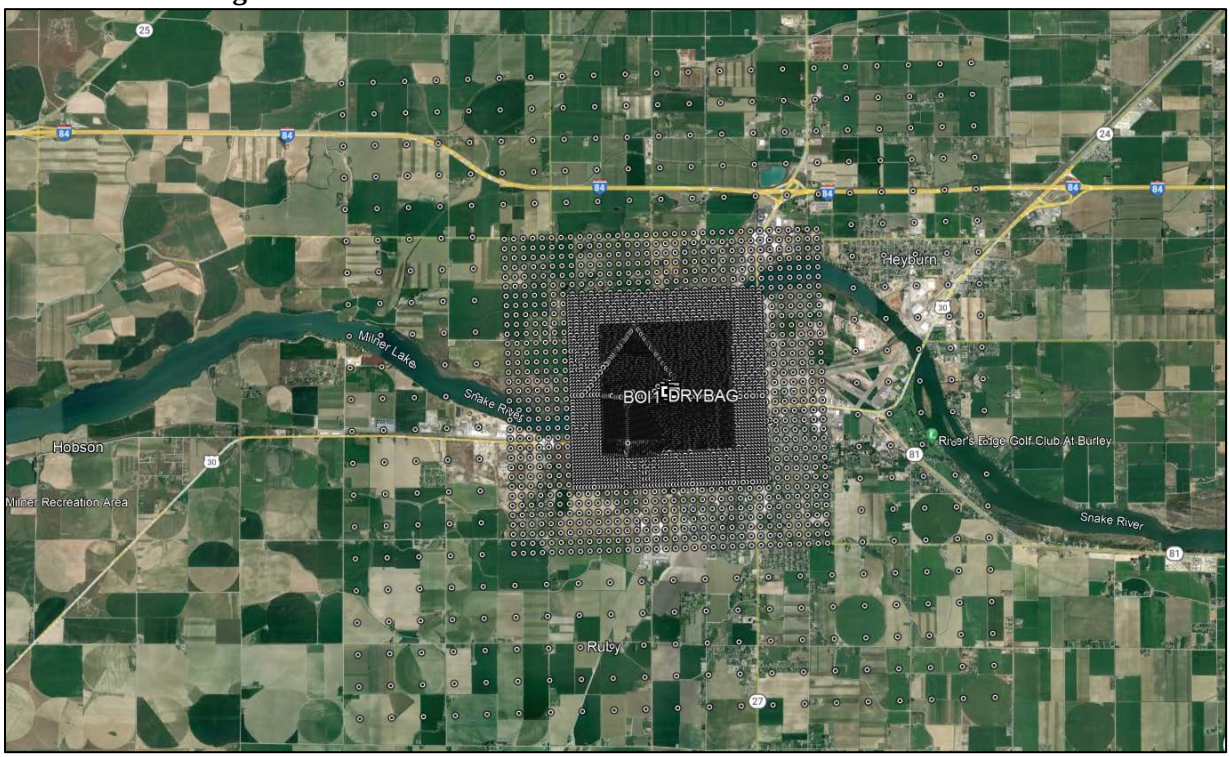


Figure 7. SIL AND TAPS RECEPTOR GRID RESOLUTION NEAR THE AMBIENT AIR BOUNDARY

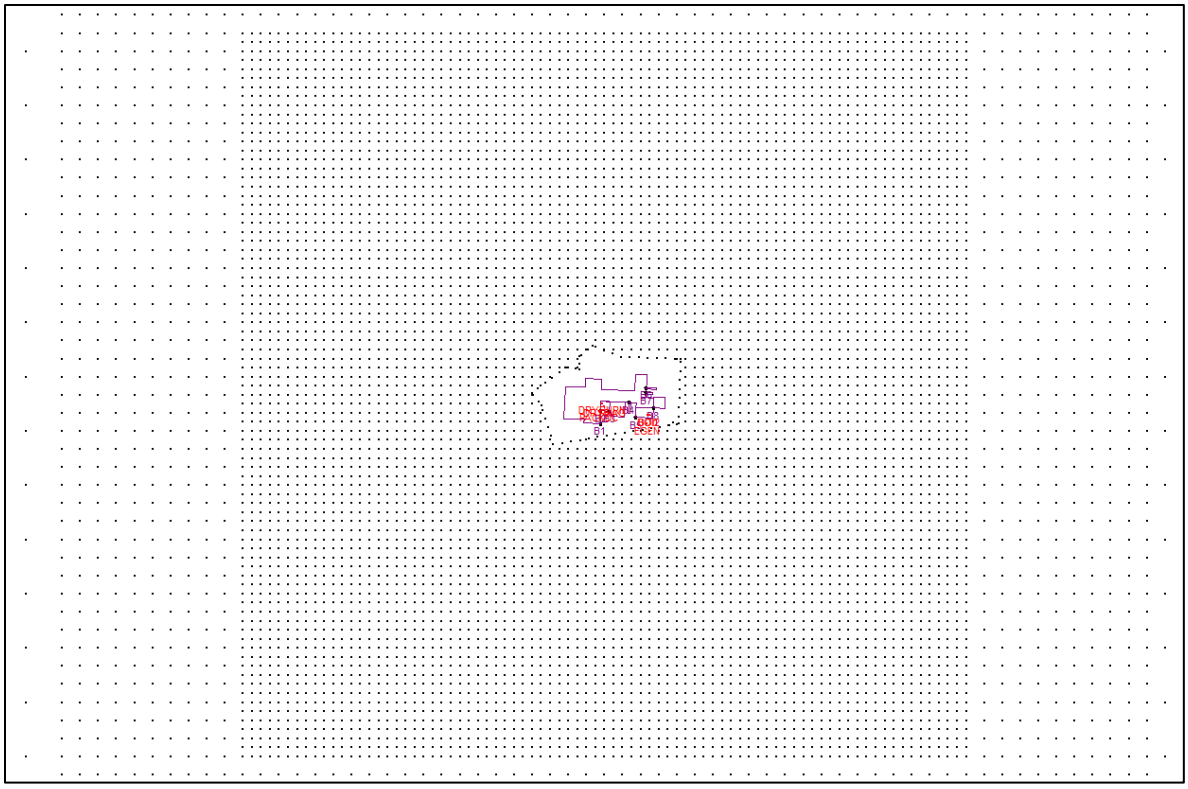


Figure 8. 24-HOUR $PM_{2.5}$ CUMULATIVE NAAQS RECEPTOR GRID – COMBINED HOT SPOT GRID AND RECEPTORS ABOVE SIL

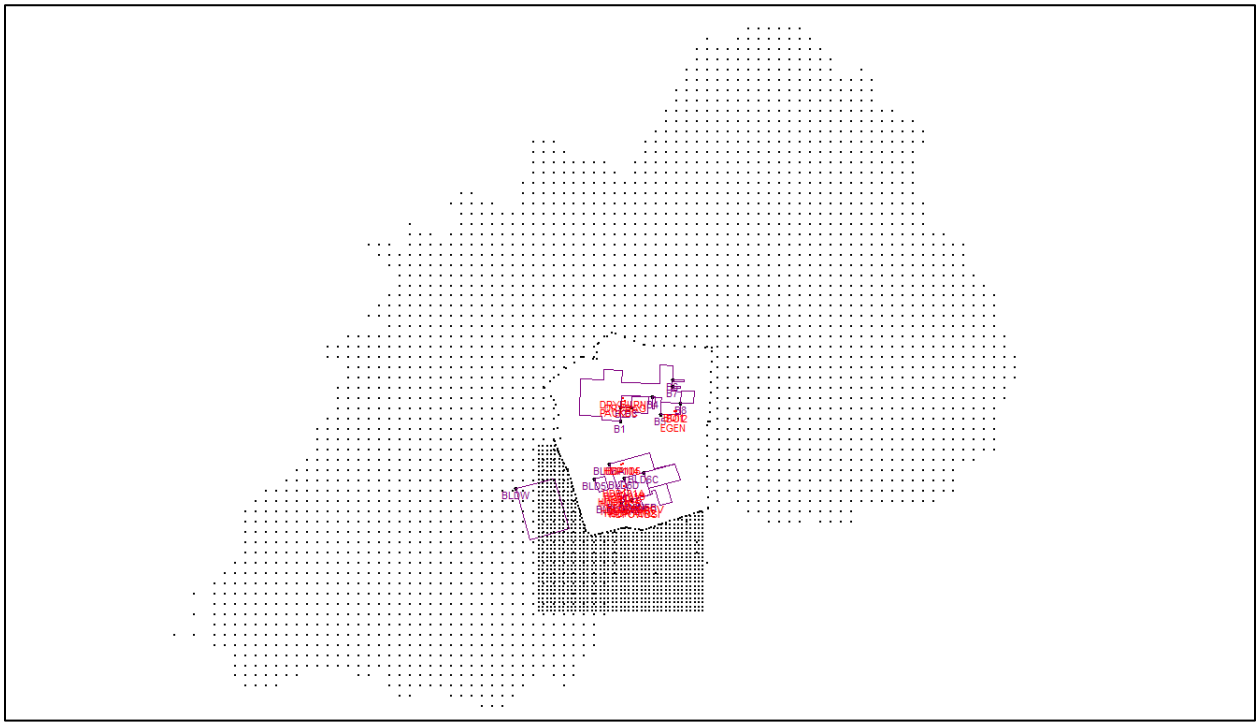


Figure 9. RECEPTOR GRID FOR NAAQS ANALYSES FOR GOLDEN EAGLE CHEESE IMPACTS ON HIGH DESERT MILK PROPERTY



3.3.10 Good Engineering Practice Stack Height

An allowable good engineering practice (GEP) stack height may be established using the following equation in accordance with Idaho Air Rules Section 512.03.b:

H = S + 1.5L, where:

H = good engineering practice stack height measured from the ground-level elevation at the base of the stack.

S = height of the nearby structure(s) measured from the ground-level elevation at the base of the stack.

L = lesser dimension, height or projected width, of the nearby structure.

All sources modeled at the facility are below GEP stack height. Consideration of downwash caused by nearby buildings was required for the GEC facility's proposed building. All structures at the co-contributing HDM facility were also included in the analyses because the HDM project required nearby structures to be included in the analyses based on modeled stack release heights that were below GEP.

4.0 SIL, NAAQS and TAPs Impact Modeling Results

4.1 Results for NAAQS Analyses

4.1.1 Significant Impact Level Analysis

The proposed project's SIL design values and compliance evaluations are listed in Table 10. Cumulative impact analyses are required for 24-hour PM_{10}, 24-hour and annual $PM_{2.5}$, and 1-hour and annual NO_2 standards.

Ambient impacts at each receptor exceeding the SIL are required to be included in the cumulative impact analyses. Trinity limited the receptors used in the cumulative NAAQS analyses to receptors where impacts exceeded the SIL for all pollutants and averaging periods.

Table 10. RESULTS FOR SIGNIFICANT IMPACT ANALYSES

Pollutant	Averaging Period	Modeled Design Value Concentration ($\mu g/m^3$)	SIL ($\mu g/m^3$)	Percent of SIL	Cumulative NAAQS Analyses Required?
PM_{10}	24-hour	8.8	5.0	176%	Yes
$PM_{2.5}$	24-hour	7.1	1.2	592%	Yes
	Annual	1.3	0.2	650%	Yes
NO_2	1-hour	88.7	7.5	1,182%	Yes
	Annual	5.3	1.0	530%	Yes

4.1.2 Cumulative NAAQS Impact Analysis

NAAQS analyses were required to be performed for 1-hour NO_2, 24-hour $PM_{2.5}$, annual $PM_{2.5}$, and 24-hour PM_{10}. Table 11 provides results for the cumulative NAAQS impact analyses. For each modeled pollutant, the total impact was calculated by adding the modeled design value for the facility-wide impacts to the ambient background value to determine the total impact, which was then compared to the NAAQS.

Two separate modeling cases were analyzed for the cumulative NAAQS analyses, which are described below:

Case 1: Facility-wide allowable emissions from both HDM and GEC were modeled using the ambient air boundary of both facilities combined. HDM is not responsible for ambient impacts within its own facility's ambient air boundary so it is appropriate to treat HDM's property as exempt from ambient air.

Case 2: Emissions from the proposed GEC facility only at receptors within HDM's ambient air boundary because HDM's property is in ambient air for the GEC facility. This case verifies impacts caused by GEC emissions on HDM's property comply with NAAQS.

Table 11. RESULTS FOR CUMULATIVE NAAQS IMPACT ANALYSES							
Pollutant	**Averaging Period**	**Case**	**Modeled Design Value Concentration ($\mu g/m^3$)**	**Background Concentration ($\mu g/m^3$)**	**Total Ambient Impact ($\mu g/m^3$)**	**NAAQS ($\mu g/m^3$)**	**Percent of NAAQS**
PM_{10}	24-hour	Case 1 – GEC and HDM emissions	41.35[a]	76.58	117.93	150	78.6%
		Case 2 – GEC emissions only	6.89[a]		83.47		55.6%
$PM_{2.5}$	24-hour	Case 1 – GEC and HDM emissions	29.0[b]	11.89	40.89	35	116.8%
		Case 2 – GEC emissions only	4.67[b]		16.56		47.3%
	Annual	Case 1 – GEC and HDM emissions	5.72[c]	5.38	11.1	12	92.5%
		Case 2 – GEC emissions only	0.63[c]		6.0		50.0%
NO_2	1-hour	Case 1 – GEC and HDM emissions	124.28[d]	56.56	180.84	188	96.2%
		Case 2 – GEC emissions only	36.32[d]		92.88		49.4%
	Annual	Case 1 – GEC and HDM emissions	7.44[e]	8.90	16.34	100	16.3%
		Case 2 – GEC emissions only	1.97[e]		10.87		10.9%

a. Design value is the maximum 6th highest 24-hour average impact of a 5-year meteorological dataset.
b. Design value is the maximum of 5-year means of the 8th highest modeled 24-hour concentration for each year of meteorological data using 5 years of meteorological data.
c. Design value is the maximum of 5-year means of annual average concentrations using 5 years of meteorological data.
d. Design value is the maximum 5-year mean of the 8th highest daily 1-hour maximum modeled concentrations for each year of meteorological data modeled.
e. Design value is the maximum annual average impact of 5 individual years.

Ambient impacts for the proposed GEC facility, when combined ambient impacts from the existing co-contributing HDM facility, and DEQ-approved ambient backgrounds, were below the 1-hour NO_2, annual $PM_{2.5}$, and 24-hour PM_{10} NAAQS at all receptors.

Ambient impacts from the proposed GEC facility, the existing co-contributing HDM facility, and the DEQ-approved ambient background value exceeded the 24-hour $PM_{2.5}$ NAAQS.

A PTC for the proposed GEC facility may be issued if a culpability analysis shows that impacts caused by the proposed GEC facility do not exceed the 24-hour $PM_{2.5}$ SIL at all receptors where the combined impacts from GEC, HDM, and ambient background exceed the NAAQS. All ranks of ambient impacts must be analyzed that are above the NAAQS. If an impact at any receptor that is attributed to the proposed GEC facility exceeds the SIL a PTC cannot be issued for the GEC project. The culpability analysis is discussed in Section 4.1.2.

4.1.2 24-hour $PM_{2.5}$ Cumulative NAAQS Culpability Analysis

Trinity performed a culpability analysis using AERMOD's MAXDCONT output. The MAXDCONT output option processes the predicted ambient impacts that are attributed to specified source groups which are paired in space and time at each receptor at each specified rank of impact. Impacts at all receptors with an aggregated impact attributed from the proposed GEC facility's requested potential emissions, HDM's co-contributing source $PM_{2.5}$ emissions, and the DEQ-approved ambient background concentration that exceed the 35 $\mu g/m^3$ 24-hour $PM_{2.5}$ NAAQS must be evaluated to verify that the proposed GEC facility's contribution to the NAAQS exceedance is below the SIL of 1.2 $\mu g/m^3$, 24-hour average. GEC's contribution must be below the SIL at all receptors and impact ranks where a NAAQS exceedance was predicted to occur. The cumulative 24-hour $PM_{2.5}$ NAAQS analyses predicted that the

NAAQS was exceeded at 18 receptors. The NAAQS was predicted to be exceeded for the design value 8th rank through the 16th rank.

The culpability analyses results based on the MAXDCONT output are presented in Table 12. Exceedances were predicted to occur at eighteen receptors in a region located southwest of the existing co-contributing HDM facility. The maximum impact for all ranks attributed to the proposed GEC facility's emissions was 1.089 µg/m^3 $PM_{2.5}$, 24-hour average. The proposed GEC facility demonstrated that it will not cause or contribute to a violation of the 24-hour $PM_{2.5}$ NAAQS, and the DEQ modeling group concludes that a PTC may be issued for the project.

Table 12. RESULTS FOR 24-HOUR $PM_{2.5}$ CULPABILITY ANALYSES

Receptor Location - UTM Coordinates NAD83 datum, Zone 12		Impact Rank	GEC + HDM + Ambient Background (µg/m^3)	GEC Facility-wide Contribution (µg/m^3)
Easting-X (meters)[b]	Northing - Y (meters)			
269,098.8	**4,713,255.4**	**8TH**	**35.7186**	**1.08875**
269,174.6	4,713,239.2	8TH	40.09936	0.84335
269,110.3	4,713,251.8	8TH	35.43117	0.76297
269,068.8	4,713,245.4	8TH	35.09634	0.71623
269,098.8	4,713,265.4	8TH	35.30014	0.67876
269,107.4	4,713,261.3	8TH	35.77229	0.65769
269,078.8	4,713,245.4	8TH	35.26184	0.63549
269,198.8	4,713,235.4	8TH	39.67833	0.58199
269,098.8	4,713,245.4	8TH	35.12161	0.55861
269,188.8	4,713,235.4	8TH	37.82246	0.54103
269,184.7	4,713,237.2	8TH	36.22583	0.53414
269,203.7	4,713,246.6	8TH	35.39428	0.52369
269,198.8	4,713,245.4	8TH	39.32085	0.49553
269,108.8	4,713,255.4	8TH	35.73829	0.43664
269,088.8	4,713,255.4	8TH	35.45379	0.43578
269,184.3	4,713,241.7	8TH	39.30943	0.43083
269,194.0	4,713,244.2	8TH	40.86967	0.40711
269,178.8	4,713,235.4	8TH	35.32379	0.22804
269,198.8	4,713,245.4	9TH	38.26294	0.66578
269,107.4	4,713,261.3	9TH	35.26428	0.65683
269,188.8	4,713,235.4	9TH	37.08628	0.5255
269,194.0	4,713,244.2	9TH	39.86535	0.45738
269,198.8	4,713,235.4	9TH	38.66461	0.37114
269,184.7	4,713,237.2	9TH	35.50052	0.35985
269,174.6	4,713,239.2	9TH	38.19747	0.32453
269,184.3	4,713,241.7	9TH	38.09727	0.2744
269,198.8	4,713,235.4	10TH	38.00843	0.75885
269,194.0	4,713,244.2	10TH	39.53676	0.73628
269,198.8	4,713,245.4	10TH	37.71322	0.68243
269,174.6	4,713,239.2	10TH	37.00496	0.62028
269,188.8	4,713,235.4	10TH	35.78326	0.34589
269,184.3	4,713,241.7	10TH	37.19984	0.22375
269,174.6	4,713,239.2	11TH	36.1753	0.72056
269,188.8	4,713,235.4	11TH	35.52167	0.54893
269,184.3	4,713,241.7	11TH	36.29394	0.49086
269,194.0	4,713,244.2	11TH	38.73081	0.45156
269,198.8	4,713,235.4	11TH	37.26394	0.38301

Table 12. RESULTS FOR 24-HOUR $PM_{2.5}$ CULPABILITY ANALYSES				
Receptor Location - UTM Coordinates NAD83 datum, Zone 12		**Impact Rank**	**GEC + HDM + Ambient Background ($\mu g/m^3$)**	**GEC Facility-wide Contribution ($\mu g/m^3$)**
Easting-X (meters)[b]	**Northing - Y (meters)**			
269,198.8	4,713,245.4	11TH	37.36368	0.29555
269,174.6	4,713,239.2	12TH	35.65211	0.64394
269,188.8	4,713,235.4	12TH	35.05035	0.6316
269,198.8	4,713,245.4	12TH	36.49739	0.6312
269,198.8	4,713,235.4	12TH	35.91341	0.57924
269,194.0	4,713,244.2	12TH	38.51943	0.41612
269,198.8	4,713,245.4	13TH	36.17297	0.55803
269,194.0	4,713,244.2	13TH	38.20088	0.43046
269,198.8	4,713,235.4	13TH	35.09582	0.39894
269,198.8	4,713,245.4	14TH	35.52024	0.4164
269,194.0	4,713,244.2	14TH	37.58738	0.36013
269,194.0	4,713,244.2	15TH	36.26813	0.48745
269,198.8	4,713,245.4	15TH	35.04748	0.4257
269,194.0	4,713,244.2	16TH	35.30597	0.63758

The locations of the eighteen receptors where the 24-hour $PM_{2.5}$ NAAQS were predicted to be exceeded are shown in Figure 10. The maximum ambient impact and rank of that impact attributed to GEC's facility-wide $PM_{2.5}$ emissions at each receptor where exceedances were predicted to occur is shown in Figure 11 using the MaxDCont Viewer. All 24-hour $PM_{2.5}$ impacts caused by GEC's emissions for the predicted exceedances were below the SIL, which documents that the proposed facility does not contribute to any modeled NAAQS violations.

Figure 10. RECEPTORS WITH CUMULATIVE IMPACTS ABOVE THE 24-HOUR $PM_{2.5}$ NAAQS

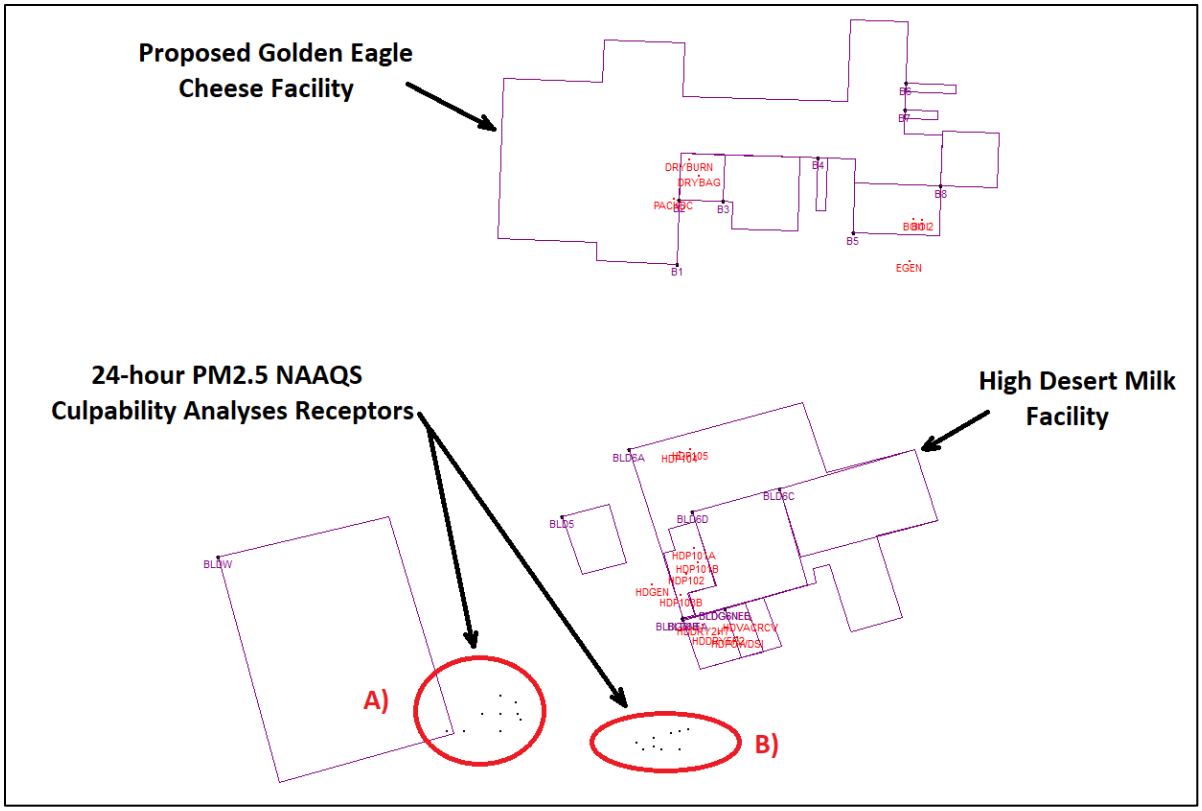
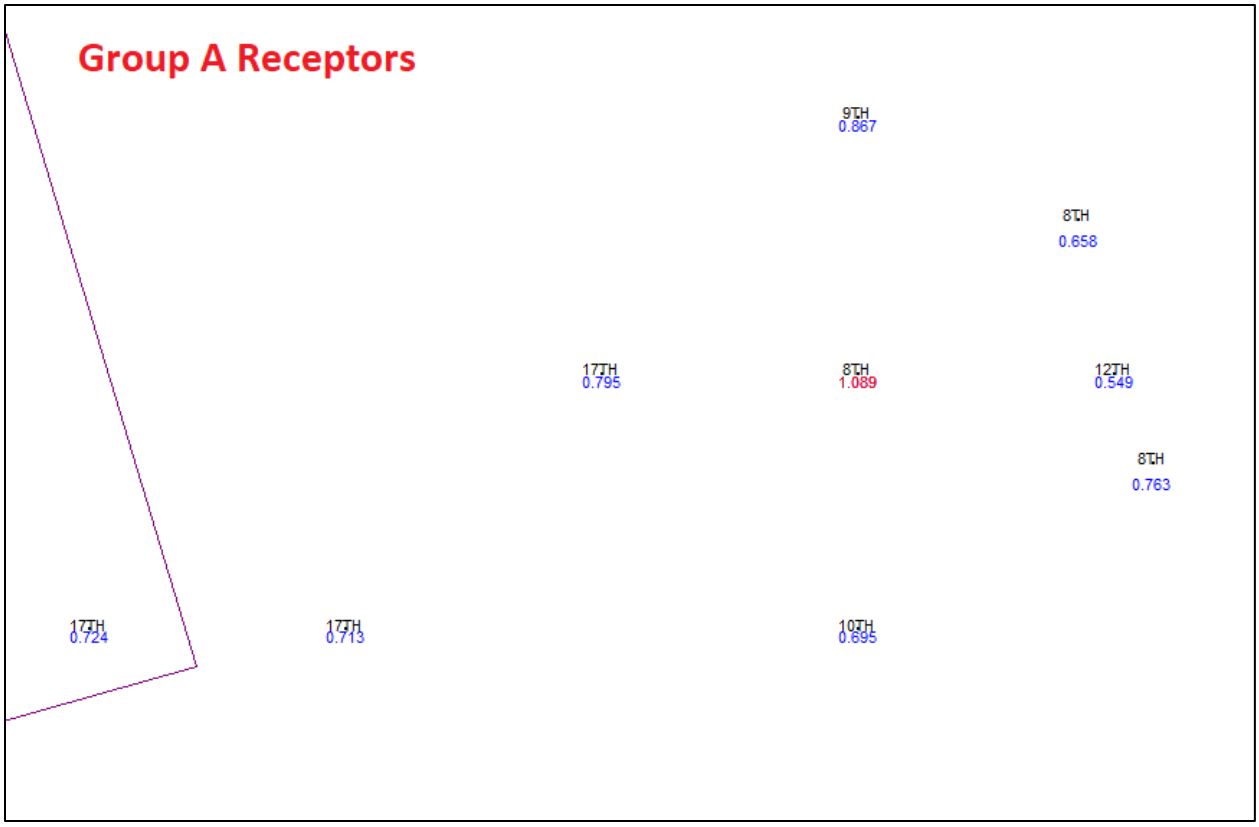
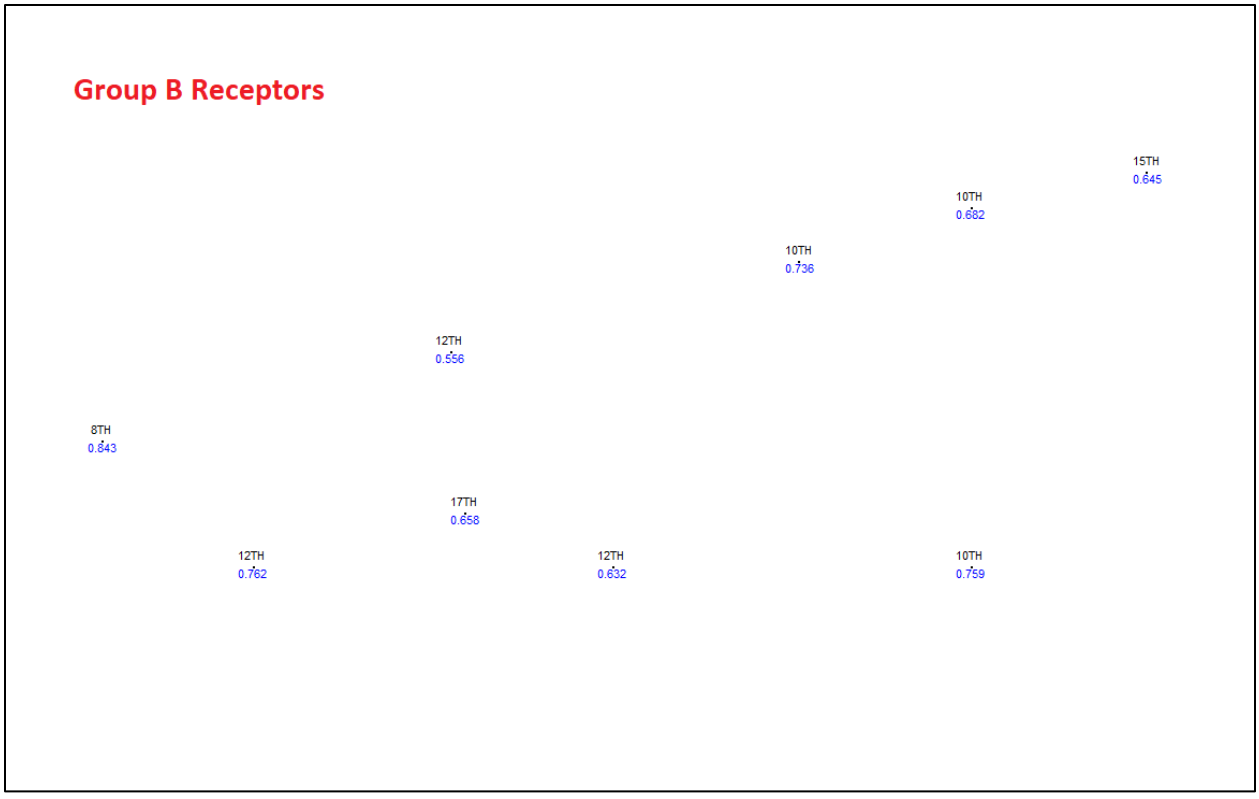


Figure 11. 24-HOUR $PM_{2.5}$ CUMULATIVE NAAQS GOLDEN EAGLE CHEESE CULPABILITY ANALYSES RESULTS





4.2 Results for TAPs Impact Analyses

Table 12 provides a summary of TAP impacts for the project for those TAPs with emission increases exceeding the ELs. The 20 MMBtu/hr natural gas-fired dryer heater was the only source of TAPs emissions subject to impact analyses requirements. Emissions of non-carcinogenic TAPs did not exceed the ELs of Idaho Air Rules Section 585.

Trinity modeled the GEC dryer heater stack with a unit emission rate of 1.0 grams/sec. The maximum annual average impact averaged over 5 years was 8.902 µg/m^3 per grams/sec of TAP emissions. Impacts were estimated by multiplying the TAP emission rate (grams/sec) and the unit emission rate predicted maximum annual ambient impact.

Table 12. TAP AIR IMPACT ANALYSIS RESULTS

TAP	Averaging Period	Emission Rate (lb/hr)	Emission Rate (grams/sec)	Maximum Modeled Impact (µg/m^3)	AACC (µg/m^3)	Percent of AACC
Arsenic	Annual	3.81E-06	4.80E-07	4.27E-06	2.3E-04	1.9%
Cadmium	Annual	2.10E-05	2.65E-06	2.27E-05	5.6E-04	4.1%
Formaldehyde	Annual	1.43E-03	1.80E-04	1.60E-03	7.7E-02	2.1%
Nickel	Annual	4.00E-05	5.04E-06	4.49E-05	4.2E-03	1.1%

5.0 Conclusions

The information submitted with the PTC application, combined with DEQ's sensitivity analyses, demonstrated to DEQ's satisfaction that emissions from the Golden Eagle Cheese facility, located in Burley, will not cause or significantly contribute to a violation of any applicable ambient air quality standard or TAP increment.

References

1. *Policy on NAAQS Compliance Demonstration Requirements.* Idaho Department of Environmental Quality Policy Memorandum. July 11, 2014.

2. Idaho Guideline for Performing Air Quality Impact Analyses. Stationary Source Program. Air Quality Division. Idaho Department of Environmental Quality. July 2021. Available at https://www.deq.idaho.gov/permits/air-quality-permitting.

3. *Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 as a Tier 1 Demonstration Tool for Ozone and $PM_{2.5}$ under the PSD Permitting Program.* United States Environmental Protection Agency, Office of Air Quality Planning and Standards. April 30, 2019. EPA-454-R-19-003. Available at https://www3.epa.gov/ttn/scram/guidance/guide/EPA-454_R-19-003.pdf.

4. *Revised DRAFT Guidance for Ozone and Fine Particulate Matter Permit Modeling*. United States Environmental Protection Agency, Office of Air Quality Planning and Standards. September 20, 2021. EPA-454-P-21-001. Available at: https://www.epa.gov/system/files/documents/2021-09/revised_draft_guidance_for_o3_pm25_permit_modeling.pdf.

5. *Clarification on the Use of AERMOD Dispersion Modeling for Demonstrating Compliance with the NO_2 National Ambient Air Quality Standard*, R. Chris Owen and Roger Brode, Environmental Protection Agency, Office of Air Quality Planning and Standards, September 30, 2014.

APPENDIX C – FACILITY DRAFT COMMENTS

The following comments were received from the facility on January 12, 2022:

Facility Comment: To confirm, in table 1.1, Whey Dryer Operations in the Source cell, the line “The shaking bed and powder transport operations” seems to end abruptly. Was something cropped from that sentence?

DEQ Response: has replaced it with “Shaking Bed and Powder Transport Operations”. They are emissions sources, and their emissions are controlled by whey dryer baghouse.

APPENDIX D – PROCESSING FEE

PTC Processing Fee Calculation Worksheet

Instructions:
Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company:	**Golden Eagle Cheese**
Address:	**1001 Idaho Ave.**
City:	**Burley**
State:	**ID**
Zip Code:	**83318**
Facility Contact:	**Brian Paulson**
Title:	**Regulatory Manager**
AIRS No.:	**031-00077**

N	Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
Y	Did this permit require engineering analysis? Y/N
N	Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO_X	20.3	0	20.3
SO_2	0.2	0	0.2
CO	18.5	0	18.5
PM10	12.6	0	12.6
VOC	1.7	0	1.7
Total:	0.0	0	**53.4**
Fee Due	**$ 5,000.00**		

Comments:

APPENDIX E – FEDERAL REGULATION REVIEW

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Federal Rule Applicability **– Form FRA**
6/7/2018

In each box in the table below, CTRL+click on the blue underlined text for instructions and information.

IDENTIFICATION	
1. Company Name:	2. Facility Name:
Golden Eagle Cheese	Burley Facility
3. Brief Project Description:	Permit To Construct. Proposed new facility. Process equipment includes: (2) natural gas fired boilers, (1) spray dryer, (1) product collection baghouse, (1) packaging operations dust collector, and (1) diesel emergency generator

APPLICABILITY DETERMINATION	
4. List all applicable subparts of the New Source Performance Standards (NSPS) (40 CFR part 60). List all non-applicable subparts of the NSPS which may appear to apply to the facility but do not. Examples of NSPS-affected emissions units include internal combustion engines, boilers, turbines, etc. Applicant must thoroughly review the list of affected emissions units.	List of all applicable subpart(s): Dc, IIII List of all non-applicable subpart(s) which may appear to apply but do not: Db ☐ Not Applicable
5. List applicable subpart(s) of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR part 61 and 40 CFR part 63). List all non-applicable subparts of the NESHAP which may appear to apply to the facility but do not. Examples of affected emission units include solvent cleaning operations, industrial cooling towers, paint stripping and miscellaneous surface coating. Reference EPA's webpage on NESHAPs for more information.	List of all applicable subpart(s): ZZZZ List of all non-applicable subpart(s) which may appear to apply but do not: ☐ Not Applicable
6. For each subpart identified above, conduct a complete regulatory analysis using the instructions and referencing the example on the following pages. **Note**: Regulatory reviews must be submitted with sufficient detail so that DEQ can verify applicability and document in legal terms why the regulation does or does not apply. Regulatory reviews submitted with insufficient detail will be determined incomplete.	☒ A detailed regulatory review has been provided ☐ DEQ has already been provided a detailed regulatory review (please provide a reference)

NESHAP Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

The diesel-fired emergency generator at the Burley facility is subject to NESHAP Subpart ZZZZ. The applicable parts are highlighted in yellow below.

Contents

§63.6580 What is the purpose of subpart ZZZZ?
§63.6585 Am I subject to this subpart?
§63.6590 What parts of my plant does this subpart cover?

§63.6580 What is the purpose of subpart ZZZZ?

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

[73 FR 3603, Jan. 18, 2008]

§63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

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

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

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

The Burley facility will be an area source of HAP emissions and will include one (1) diesel-fired CAT D500 GC stationary RICE engine.

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

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

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

§63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

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

(1) *Existing stationary RICE.*

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

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

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

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

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

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

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

The Burley Facility will be an area source of HAP emissions and will commence construction of the CAT stationary RICE after June 12, 2006. Therefore, the engines will be new stationary RICE.

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

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

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

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

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

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

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

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

The CAT stationary RICE at the Burley facility will be subject to, and will comply with the requirements of 40 CFR Part 60 Subpart IIII. Therefore, no further requirements of this subpart apply to the engines.

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

Form FRA Regulatory Review

NSPS Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

The two boilers at the Burley facility are industrial steam generating units subject to NSPS Subpart Dc. The applicable parts are highlighted in yellow below.

Contents

§60.40c Applicability and delegation of authority.
§60.41c Definitions.
§60.42c Standard for sulfur dioxide (SO2).
§60.43c Standard for particulate matter (PM).
§60.44c Compliance and performance test methods and procedures for sulfur dioxide.
§60.45c Compliance and performance test methods and procedures for particulate matter.
§60.46c Emission monitoring for sulfur dioxide.
§60.47c Emission monitoring for particulate matter.
§60.48c Reporting and recordkeeping requirements.

SOURCE: 72 FR 32759, June 13, 2007, unless otherwise noted.

§60.40c Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

Each boiler at the Burley facility has a fuel burning capacity between 10 and 100 MMBtu/hr (40 CFR 60.40(c)(e)) and is modified or constructed after June 9, 1989.

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.

(e) Affected facilities (*i.e.* heat recovery steam generators and fuel heaters) that are associated with stationary combustion turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators, fuel heaters, and other affected facilities that are capable of combusting more

than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator, fuel heater, or other affected facility is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(f) Any affected facility that meets the applicability requirements of and is subject to subpart AAAA or subpart CCCC of this part is not subject to this subpart.

(g) Any facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not subject to this subpart.

(h) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and NO_x standards under this subpart and the SO_2 standards under subpart J or subpart Ja of this part, as applicable.

(i) Temporary boilers are not subject to this subpart.

§60.42c Standard for sulfur dioxide (SO2).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

This standard is not applicable since the boilers at Burley facility only combust natural gas and no coal, oil, or coal and oil with any other fuel.

§60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

This standard is not applicable since the boilers at Burley facility only combust natural gas and no coal, wood, or oil.

§60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and §60.8(b), performance tests required under §60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

The sulfur dioxide standards are not applicable to the boilers at the Burley Facility.

§60.45c Compliance and performance test methods and procedures for particulate matter.

This standard is not applicable since the boilers at Burley facility only combust natural gas and no coal, wood, or oil.

§60.46c Emission monitoring for sulfur dioxide.

This standard is not applicable since the boilers at Burley facility only combust natural gas and no coal, wood, or oil.

§60.47c Emission monitoring for particulate matter.

The PM emission standards are not applicable since the boilers at Burley facility only combust natural gas and no coal, wood, or oil.

§60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

Golden Eagle will submit notification of the date of construction and actual startup as provided by §60.7.

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

The design heat input capacity and identification of fuels to be combusted will be included in the notification.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

The annual capacity factor at which Golden Eagle anticipates operating the units based on all fuels fired and each fuel fired will be included in the notification.

(4) Notification if an emerging technology will be used for controlling SO_2 emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may

require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2 emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in §60.7, the owner or operator of an affected facility subject to the opacity limits in §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator

(d) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO_2 emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO_2 emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO_2 or diluent (O_2 or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

The units combust only natural gas, therefore, (g)(2) or (g)(3) applies.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO_2 standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

The affected units only combust natural gas. The Burley Facility will record and maintain records of the amount of natural gas combusted in the affected units each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO_2 standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

The Burley Facility will maintain all records required under this section for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

NSPS Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

The diesel-fired emergency generator at the Burley facility is subject to NSPS Subpart IIII. The applicable parts are highlighted in yellow below.

Contents

§60.4200 Am I subject to this subpart?
§60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?
§60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?
§60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?
§60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
§60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
§60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?
§60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?
§60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?
§60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?
§60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?
§60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?
§60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?
§60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?
§60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?
§60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?
§60.4216 What requirements must I meet for engines used in Alaska?
§60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?
§60.4218 What parts of the General Provisions apply to me?
§60.4219 What definitions apply to this subpart?
Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder
Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency

Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder
Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines
Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines
Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines
Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines
Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder
Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII
SOURCE: 71 FR 39172, July 11, 2006, unless otherwise noted.

§60.4200 Am I subject to this subpart?

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

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

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

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

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

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

The Burley Facility will have one (1) diesel-fired CAT D500 GC stationary compression ignition internal combustion engine which will be manufactured and constructed after 2006.

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

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

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

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

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

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those

parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

EMISSION STANDARDS FOR MANUFACTURERS

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

This section is not applicable since the engine at the Burley Facility is an emergency engine.

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

Although the Burley Facility is not an engine manufacturer, these emission standards apply to the emergency engine per §4205(b)

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

The emergency engine at the Burley Facility will have a displacement less than 10 liters per cylinder and has a maximum power less than 2,237 kW but greater than 37 kW and will be subject to the emission standards specified in paragraph (a)(2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

The emergency engine at the Burley Facility will be compliant with the emission standards in 40 CFR 89.112 and 40 CFR 89.133 as applicable.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

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

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

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

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

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

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Remote areas of Alaska; and

(2) Marine offshore installations.

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011; 81 FR 44219, July 7, 2016]

EMISSION STANDARDS FOR OWNERS AND OPERATORS

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

This section is not applicable since the engine at the Burley Facility is an emergency engine.

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

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

The emergency generator at the Burley Facility is not a fire pump engine and will commence construction after 2007 and have a displacement of less than 30 liters per cylinder.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

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

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

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

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

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

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

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

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in §60.4212.

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

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

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

The emergency generators at the Burley facility will comply with the emission standards in §§60.4204 and 60.4205 over the entire life of the engine.

[76 FR 37969, June 28, 2011]

FUEL REQUIREMENTS FOR OWNERS AND OPERATORS

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

(a) [Reserved]

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

The emergency generator will be diesel-fired and have a displacement of less than 30 liters per cylinder. Therefore, the diesel fuel must meet the requirements of 40 CFR 1090.305.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder must use diesel fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 78 FR 6695, Jan. 30, 2013; 85 FR 78463, Dec. 4, 2020]

OTHER REQUIREMENTS FOR OWNERS AND OPERATORS

§60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

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

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

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

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

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

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

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000

KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

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

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

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

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

The Burley Facility will meet the monitoring requirements of this section and §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

The Burley Facility will install a non-resettable hour meter to the affected source prior to startup.

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

COMPLIANCE REQUIREMENTS

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

This section is not applicable since Golden Eagle Cheese is not a manufacturer of a stationary CI internal combustion engine.

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

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

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

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

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

The Burley Facility will comply with the emission standards in 40 CFR 89.112 and 89.133 as applicable and will operate and maintain the emergency engine as specified by the manufacturer, including changing of emission-related settings.

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

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

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

The emergency generator model year is later than 2007 and is subject to §60.4205(b). Therefore, the emission standards set by §60.4205(b) will be met, as applicable. The engine will also be installed and configured accorded to the manufacturer’s emission-related specifications.

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

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and NO_x and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_x and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

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

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

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

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

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

The Burley facility will use the generator for emergency purposes and meet the operating requirements described in paragraphs (f) (1) through (3).

(ii) [Reserved]

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

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

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

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

(h) The requirements for operators and prohibited acts specified in 40 CFR 1039.665 apply to owners or operators of stationary CI ICE equipped with AECDs for qualified emergency situations as allowed by 40 CFR 1039.665.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011; 78 FR 6695, Jan. 30, 2013; 81 FR 44219, July 7, 2016]

TESTING REQUIREMENTS FOR OWNERS AND OPERATORS

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

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

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

The stationary CI ICE will have a displacement of less than 10 liters per cylinder. If performance testing is required, the performance test will be conducted according to 40 CFR part 1039, subpart F.

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

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

NTE requirement for each pollutant = 1.25 × STD [Eq. 1]

View or download PDF

Where:

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

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

The emergency engine is subject to emission standards in 40 CFR 89.112 and will comply with the above requirements as applicable.

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

Where:

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

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

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

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

This section is not applicable since the emergency engine at the Burley Facility has a displacement less than 30 liters.

NOTIFICATION, REPORTS, AND RECORDS FOR OWNERS AND OPERATORS

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

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

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

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

(ii) The address of the affected source;

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

(iv) Emission control equipment; and

(v) Fuel used.

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

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

(ii) Maintenance conducted on the engine.

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

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

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

The stationary CI internal combustion engine is an emergency stationary internal combustion engine certified for stationary emergency application. Therefore, the time of operation of the engine and the reason the engine is operated will be recorded, including whether for emergency or non-emergency service.

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

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4.

(e) Owners or operators of stationary CI ICE equipped with AECDs pursuant to the requirements of 40 CFR 1039.665 must report the use of AECDs as required by 40 CFR 1039.665(e).

[71 FR 39172, July 11, 2006, as amended at 78 FR 6696, Jan. 30, 2013; 81 FR 44219, July 7, 2016]

SPECIAL REQUIREMENTS
GENERAL PROVISIONS

§60.4218 What parts of the General Provisions apply to me?

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

The Burley facility will comply with the General Provisions which apply in Table 8, as shown below.

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

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

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

			displacement of (≥30 liters per cylinder.
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	