

Statement of Basis

**Permit to Construct No. P-2015.0022
Project ID 61524**

**Gayle Manufacturing Company, Inc.
Caldwell, Idaho**

Facility ID 027-00148

Final

November 9, 2015

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Permit Writer**

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

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

ASTM	American Society for Testing and Materials
Btu	British thermal units
CAA	Clean Air Act
CEMS	continuous emission monitoring systems
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CI	compression ignition
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	CO ₂ equivalent emissions
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gases
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hp	horsepower
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
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
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
PTC	permit to construct
PTE	potential to emit
RICE	reciprocating internal combustion engines
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
scf	standard cubic feet
SO ₂	sulfur dioxide
SO _x	sulfur oxides
TAP	toxic air pollutants
ULSD	ultra-low sulfur diesel
VOC	volatile organic compounds
yd ³	cubic yards
µg/m ³	micrograms per cubic meter

FACILITY INFORMATION

Description

Gayle Manufacturing Company proposes to construct a new structural steel fabrication plant to be located at the southwest corner of Weitz Road and Highway 19 in Caldwell, Idaho. The facility will fabricate structural steel members to be used in the construction of multi-story steel framed buildings. The facility will be referred to as GMC-A. The fabrication process will include the following steps:

- Receive approximately 75% of raw steel from steel mills by rail and receive approximately 25% of raw steel from steel service centers by truck.
- Stage raw steel in the facility yard prior to fabrication.
- Move raw steel to the material storage crane bay via forklift.
- Process raw steel using drilling machines, cutting machines, welding machines, bending machines, and shearing machines.
- Paint finished structural steel products with a shop coat primer outside on a concrete slab.

The facility will consist of the following 8 separate air emission sources:

- Natural gas space heaters to provide heat to the facility.
- Abrasive blasting inside an enclosed vessel with a dust collector for control of particulate matter emissions.
- Welding inside a building with a Robovent filtration system for control of particulate matter emissions.
- Plasmarc cutters fitted with dust collectors for control of particulate matter emissions.
- Natural gas process heaters and cutting torches.
- Diesel emergency fire-pump engine.
- Propane emergency engine.
- Painting of fabricated steel parts.

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 structural steel fabrication plant to be located at the southwest corner of Weitz Road and Highway 19 in Caldwell, Idaho.

Application Chronology

May 14, 2015	DEQ received an application and an application fee.
May 26 – June 10, 2015	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
June 5, 2015	DEQ determined that the application was incomplete.
July 1, 2015	DEQ received supplemental information from the applicant.
July 30, 2015	DEQ determined that the application was incomplete.
August 7, 2015	DEQ received supplemental information from the applicant.

August 17, 2015	DEQ determined that the application was complete.
October 21, 2015	DEQ made available the draft permit and statement of basis for peer and regional office review.
November 2, 2015	DEQ made available the draft permit and statement of basis for applicant review.
November 3, 2015	DEQ received the permit processing fee.
November 9, 2015	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Table 1 EMISSIONS UNITS AND CONTROL EQUIPMENT INFORMATION

Source ID No.	Sources	Control Equipment	Emission Point ID No.
	<u>Structural Steel Welding:</u> Max. production: 2,303,880 lb/yr of welding wire	<u>Filtration Unit:</u> Manufacturer: Robovent or Equivalent Model: DTS-13000-10 Type: Cartridge No. of cartridges: 10 Control efficiency: 99.5% at 0.5 micron	<u>Fan 1, Fan 2</u> Exit height: 37 ft Exit diameter: 3.7 ft Exit flow velocity: 47.4 ft/sec Exit temperature: ambient
	<u>Plasmarc Cutters (10 units):</u> Manufacturer: FPB 1500/3 or Equivalent Model: Hypertherm HT2000	<u>Dust Collector:</u> Manufacturer: Donaldson or Equivalent Model: DF T2-8 Number of bags: 8 Control efficiency: 99.99% at 0.5 micron	<u>Fan 1, Fan 2</u> Exit height: 37 ft Exit diameter: 3.7 ft Exit flow velocity: 47.4 ft/sec Exit temperature: ambient
	<u>Abrasive Blasting:</u> Manufacturer: FICEP Shot Blast Machine or Equivalent Abrasive: Steel shot/steel grit	<u>Dust Collector:</u> Manufacturer: Wheelabrator or Equivalent Model: Air-Shoc A40/20-T2-VO-A Type: Cartridge No. of cartridges: 38	<u>Vent 1</u> Exit height: 36.5 ft Exit diameter: 2.82 ft Exit flow velocity: 0.8 ft/sec Exit temperature: ambient
	<u>Natural Gas Process Heating and Cutting Torches:</u> Manufacturer: Proprietary	None	<u>Fan 1, Fan 2</u> Exit height: 37 ft Exit diameter: 3.7 ft Exit flow velocity: 47.4 ft/sec Exit temperature: ambient
	<u>Steel Parts Coating:</u> Coating: Sherwin Williams, B66 series, Universal Acrylic Primer or Equivalent	High Transfer Efficiency Application Equipment (65 % or greater)	Unenclosed Outdoor Application
	<u>Natural Gas Space Heating (30 units):</u> Type: Gas-fired infrared Manufacturer: Detroit Radiant or Equivalent Model: DR60 Rating: 60,000 Btu/Hr	None	<u>F1, F2, F3, F4, F5, F6, F7, F8</u> Exit height: 19.3 ft Exit diameter: 0.25 ft Exit flow velocity: 16 ft/sec Exit temperature: ambient
	<u>Natural Gas Space Heating (18 units):</u> Type: Gas-fired infrared Manufacturer: Detroit Radiant or Equivalent Model: DR75 Rating: 75,000 Btu/Hr	None	<u>F1, F2, F3, F4, F5, F6, F7, F8</u> Exit height: 19.3 ft Exit diameter: 0.25 ft Exit flow velocity: 16 ft/sec Exit temperature: ambient
	<u>Natural Gas Space Heating (28 units):</u> Type: Gas-fired infrared Manufacturer: Detroit Radiant or Equivalent Model: DR160 Rating: 160,000 Btu/Hr	None	<u>F1, F2, F3, F4, F5, F6, F7, F8</u> Exit height: 19.3 ft Exit diameter: 0.25 ft Exit flow velocity: 16 ft/sec Exit temperature: ambient

Source ID No.	Sources	Control Equipment	Emission Point ID No.
	<u>Natural Gas Furnace (8 units):</u> Manufacturer: Cambridge Engr. or Equivalent Model: S400 and S950 Rating: 110,000 Btu/Hr	None	<u>Vent 2</u> Exit height: 40.7 ft Exit diameter: 2.82 ft Exit flow velocity: 0.8 ft/sec Exit temperature: ambient

	<u>Emergency Fire-Pump Engine:</u> Manufacturer: John Deere Model: JU6H-UFAD98 Fuel: ULSD Engine Model Yr: 2014 Rating: 315 HP	None	<u>FP</u> Exit height: 11 ft Exit diameter: 0.5 ft Exit flow velocity: horizontal Exit temperature: 961 °F
	<u>Emergency IC Engine</u> Manufacturer: Generac Model: QT036 Fuel: Propane Rating: 36 KW	None	<u>EG</u> Exit height: 12 ft Exit diameter: 0.5 ft Exit flow velocity: 25.5 ft/sec Exit temperature: 1076 °F

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 point sources of emissions from the facility. DEQ determined that emissions that would be emitted as “process fugitives”, including painting and space heating emissions, are sources that could reasonably be controlled and exhausted through a vent or stack. These emissions are treated as point source emissions for the purposes of facility classification and calculation of PTC processing fees.

Emissions estimates of criteria pollutant, GHG, HAP PTE were based on emission factors from AP-42, equipment vendors, operation of 7,296 hours per year, and process information specific to the facility for this proposed project.

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 as 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 this project uncontrolled Potential to Emit is based upon a worst-case for operation of the facility of 7,296 hr/yr.

Table 2 UNCONTROLLED POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC	CO _{2e}
Source	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Point Sources						
Structural Steel Welding	17.4	--	--	--	--	--
Plasmarc Cutters	407	--	--	--	--	--
Abrasive Blasting	0.12	--	--	--	--	--
Natural Gas Process Heating and Cutting Torches	2.66E-02	2.10E-03	0.35	0.29	1.93E-02	419
Structural Steel Parts Painting	1.6	--	--	--	1.6	--
Natural Gas Space Heating and Furnaces	0.248	1.95E-02	3.3	2.7	0.179	4,672
Emergency Fire-Pump Engine	1.04E-02	8.19E-04	0.468	0.07	1.73E-02	85
Emergency IC Engine	2.42E-03	7.32E-05	0.275	0.46	3.68E-03	15
Total, Point Sources	426.5	0.02	4.4	3.6	1.82	5,190

The following table presents the uncontrolled Potential to Emit for HAP pollutants as 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 this project uncontrolled Potential to Emit is based upon a worst-case for operation of the facility of 7,296 hr/yr.

Table 3 UNCONTROLLED POTENTIAL TO EMIT FOR HAZARDOUS AIR POLLUTANTS

Hazardous Air Pollutants	PTE (T/yr)
1,1,2,2-Tetrachloroethane	3.15E-06
1,1,2-Trichloroethane	1.90E-06
1,3-Butadiene	8.65E-05
1,3-Dichloropropene	1.58E-06
Acetaldehyde	4.27E-04
Acrolein	3.37E-04
Arsenic	7.22E-06
Benzene	3.69E-04
Beryllium	4.33E-07
Cadmium	3.97E-05
Carbon Tetrachloride	2.20E-06
Chlorobenzene	1.61E-06
Chloroform	1.70E-06
Chromium	2.92E-04
Cobalt	3.03E-06
Ethylbenzene	3.09E-06
Ethylene Dibromide	2.65E-06
Formaldehyde	5.38E-03
Hexane	6.50E-02
Manganese (dust)	5.60E-03
Manganese (fume)	8.43E-03
Methanol	3.81E-04
Methylene Chloride	5.13E-06

Hazardous Air Pollutants	PTE (T/yr)
Napthalene	4.29E-05
Nickel	2.69E-04
Selenium	8.66E-07
Styrene	1.48E-06
Toluene	2.34E-04
Vinyl Chloride	8.93E-07
Xylene	5.38E-05
Total	0.09

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.

Post project potential to emit estimates were based on the following assumptions:

- Welding emissions were based on using 2,303,880 lb/yr of welding wire (as proposed by the applicant) and AP-42 Section 12.19.
- Plasmarc cutter emissions were based on AP-42 Section 12 and a vendor guarantee of 99.99% control efficiency for the control equipment.
- Abrasive blasting emissions were estimated using a vendor provided 1 mg/m³ emission rate from the control equipment.
- Natural gas process heating and cutting torch emissions were based on AP-42 Section 1.4 and operation for 7,296 hours per year.
- Coating emissions were based on VOC and solids content of the coatings and a maximum usage of 60 gallons/day and 10,000 gallons/year. Transfer efficiency of the coating application equipment was assumed to be 65% and the ratio of PM₁₀ to PM_{2.5} was estimated at 1 to 1.
- Space heater emissions were based on AP-42 Section 1.4 and operating all of the heaters at maximum capacity for 7,296 hours per year.
- Fire-pump engine emissions were based on AP-42 Section 3.3 and operation for 500 hours per year.
- Emergency engine emissions were based on AP-42 Section 3.2 and operation for 500 hours per year.

The following table presents the post project Potential to Emit for criteria and GHG pollutants from all emissions units at the facility as determined 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		CO ₂ e	
	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)	lb/hr ^(a)	T/yr ^(b)
Structural Steel Welding	0.0199	0.0870	--	--	--	--	--	--	--	--	--	--
Plasmarc Cutters	0.0112	0.0407	--	--	--	--	--	--	--	--	--	--
Abrasive Blasting	0.03	0.10	--	--	--	--	--	--	--	--	--	--
Natural Gas Process Heating and Cutting Torches	0.0073	0.0266	0.0006	0.0021	0.0961	0.3500	0.0807	0.2940	0.0053	0.0193	115	419
Structural Steel Parts Painting	1.6	1.6	--	--	--	--	--	--	1.60	1.60	--	--
Natural Gas Space Heating and Furnaces	0.0679	0.2480	0.0054	0.0195	0.893	3.26	0.750	2.74	0.0420	0.1790	1,281	4,672
Emergency Fire-Pump Engine	0.0416	0.0104	0.0033	0.0008	1.87	0.468	0.2780	0.0694	0.0694	0.0173	338	85
Emergency IC Engine	0.0097	0.0024	0.0003	0.00007	1.10	0.275	1.85	0.463	0.0147	0.0037	58	15
Post Project Totals	1.8	2.1	0.009	0.02	4.0	4.4	3.0	3.6	1.7	1.8	1,792	5,190

- 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		CO ₂ e	
	lb/hr	T/yr	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	0.00	0.00
Post Project Potential to Emit	1.8	2.1	0.009	0.02	4.0	4.4	3.0	3.6	1.7	1.8	1,792	5,190
Changes in Potential to Emit	1.8	2.1	0.009	0.02	4.0	4.4	3.0	3.6	1.7	1.8	1,792	5,190

Non-Carcinogenic TAP Emissions

A summary of the estimated PTE for emissions increase of non-carcinogenic toxic air pollutants (TAP) is provided in the following table.

Table 6 POST PROJECT POTENTIAL TO EMIT FOR NON-CARCINOGENIC TOXIC AIR POLLUTANTS

Non-Carcinogenic Toxic Air Pollutants	Post Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
1,2-Dichloropropane	6.47E-06	23.133	No
Acrolein	1.50E-03	0.017	No
Barium	1.37E-04	0.033	No
Carbon black	4.16E-04	0.23	No
Chlorobenzene	6.42E-06	23.3	No
Chromium	7.81E-05	0.033	No
Cobalt	7.22E-07	0.0033	No
Copper dust	6.61E-05	0.067	No
Copper fume	7.31E-06	0.013	No
Dichlorobenzene	1.03E-05	20	No
Ethyl benzene	1.23E-05	29	No
Hexane (n-Hexane)	1.55E-02	12	No
Iron oxide	2.54E-02	0.333	No
Iron salts	1.11E-02	0.067	No
Manganese dust	1.34E-03	0.333	No
Manganese fume	2.11E-03	0.067	No
Methanol	1.52E-03	17.3	No
Molybdenum	9.46E-06	0.333	No
Napthalene	2.29E-04	3.33	No
Pentane	2.23E-02	118	No
Selenium	2.06E-07	0.013	No
Silicon	5.95E-04	0.667	No
Styrene	5.92E-06	6.67	No
Toluene	1.15E-03	25	No
Vanadium	1.98E-05	0.003	No
Xylene	6.87E-04	29	No
Zinc	2.49E-04	0.667	No

None of the PTEs for non-carcinogenic TAP were exceeded as a result of this project. Therefore, modeling is not required for any non-carcinogenic TAP because none of the 24-hour average non-carcinogenic screening ELs identified in IDAPA 58.01.01.585 were exceeded.

Carcinogenic TAP Emissions

A summary of the estimated PTE for emissions increase of carcinogenic TAPs is provided in the following table.

Table 7 POST PROJECT POTENTIAL TO EMIT FOR CARCINOGENIC TOXIC AIR POLLUTANTS

Carcinogenic Toxic Air Pollutants	Post Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
1,1,2,2-Tetrachloroethane	1.26E-05	1.1E-05	Yes
1,1,2-Trichloroethane	7.62E-06	4.2E-04	No
1,1-Dichloroethane	5.62E-06	2.70E01	No
1,2-Dichloroethane	5.62E-06	2.67E00	No
1,3-Butadiene	4.11E-04	2.4E-05	Yes
1,3-Dichloropropene	6.32E-06	1.9E-07	Yes
3-Methylchloranthene	1.55E-08	2.5E-06	No
Acetaldehyde	2.98E-03	3.0E-03	No
Arsenic	1.72E-06	1.5E-06	Yes
Benzene	2.74E-03	8.0E-04	Yes
Beryllium	1.03E-07	2.8E-05	No
Cadmium	9.46E-06	3.7E-06	Yes
Carbon Tetrachloride	8.81E-06	4.4E-04	No
Chloroform	6.82E-06	2.8E-04	No
Ethylene Dibromide	1.06E-05	3.0E-05	No
Formaldehyde	1.33E-02	5.1E-04	Yes
Methylene Chloride	2.05E-05	1.6E-03	No
Nickel	7.09E-05	2.7E-05	Yes
PAH (except 7-PAH group)	1.66E-04	9.1E-05	Yes
POM (7-PAH) ^a	7.74E-05	2.0E-06	Yes
Vinyl Chloride	3.57E-06	9.4E-04	No

a) Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. The total is compared to benzo(a)pyrene.

Some of the PTEs for carcinogenic TAPs were exceeded as a result of this project. Therefore, modeling is required for 1,1,2,2-Tetrachloroethane, 1,3-Butadiene, 1,3-Dichloropropene, Arsenic, Benzene, Cadmium, Formaldehyde, Nickel, PAH except 7-PAH group, and POM because the annual average carcinogenic screening ELs identified in IDAPA 58.01.01.586 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 8 HAZARDOUS AIR POLLUTANTS EMISSIONS POTENTIAL TO EMIT SUMMARY

Hazardous Air Pollutants	PTE (lb/hr)	PTE (T/yr)
1,1,2,2-Tetrachloroethane	1.26E-05	3.15E-06
1,1,2-Trichloroethane	7.62E-06	1.90E-06
1,1-Dichloroethane	5.62E-06	1.41E-06
1,2-Dichloroethane	5.62E-06	1.41E-06
1,2-Dichloropropane	6.47E-06	1.62E-06
1,3-Butadiene	4.11E-04	8.65E-05
1,3-Dichloropropene	6.32E-06	1.58E-06
Acetaldehyde	2.98E-03	4.27E-04
Acrolein	1.50E-03	3.37E-04
Arsenic	1.72E-06	7.22E-06
Benzene	2.74E-03	3.69E-04
Beryllium	1.03E-07	4.33E-07
Cadmium	9.46E-06	3.97E-05
Carbon Tetrachloride	8.81E-06	2.20E-06
Chlorobenzene	6.42E-06	1.61E-06
Chloroform	6.82E-06	1.70E-06
Chromium	7.81E-05	2.92E-04
Cobalt	7.22E-07	3.03E-06
Dichlorobenzene	1.03E-05	4.33E-05
Ethyl benzene	1.23E-05	3.06E-06
Formaldehyde	1.33E-02	5.38E-03
Hexane	1.55E-02	6.50E-02
Manganese	3.44E-03	1.40E-02
Methanol	1.52E-03	3.81E-04
Naphthalene	2.29E-04	4.29E-05
Nickel	7.09E-05	2.69E-04
PAH	2.43E-04	2.78E-05
Selenium	2.06E-07	8.66E-07
Styrene	5.92E-06	1.48E-06
Toluene	1.15E-03	2.34E-04
Vinyl Chloride	3.57E-06	8.93E-07
Xylene (o-, m-, p-isomers)	6.87E-04	5.38E-05
Totals	0.04	0.09

Ambient Air Quality Impact Analyses

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 Canyon County, which is designated as attainment or unclassifiable for PM_{2.5}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Facility Classification

The AIRS/AFS facility classification codes are as follows:

For THAPs (Total Hazardous Air Pollutants) Only:

- A = Use when any one HAP has actual or potential emissions ≥ 10 T/yr or if the aggregate of all HAPS (Total HAPs) has actual or potential emissions ≥ 25 T/yr.
- SM80 = Use if a synthetic minor (potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable limitations) and the permit sets limits ≥ 8 T/yr of a single HAP or ≥ 20 T/yr of THAP.
- SM = Use if a synthetic minor (potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable limitations) and the potential HAP emissions are limited to < 8 T/yr of a single HAP and/or < 20 T/yr of THAP.
- B = Use when the potential to emit without permit restrictions is below the 10 and 25 T/yr major source threshold
- UNK = Class is unknown

For All Other Pollutants:

- A = Actual or potential emissions of a pollutant are ≥ 100 T/yr.
- SM80 = Use if a synthetic minor for the applicable pollutant (potential emissions fall below 100 T/yr if and only if the source complies with federally enforceable limitations) and potential emissions of the pollutant are ≥ 80 T/yr.
- SM = Use if a synthetic minor for the applicable pollutant (potential emissions fall below 100 T/yr if and only if the source complies with federally enforceable limitations) and potential emissions of the pollutant are < 80 T/yr.
- B = Actual and potential emissions are < 100 T/yr without permit restrictions.
- UNK = Class is unknown.

Table 9 Regulated Air Pollutant Facility Classification

Pollutant	Uncontrolled PTE (T/yr)	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM	426.5	2.1	100	B
PM10/PM2.5	426.5	2.1	100	B
SO2	0.02	0.02	100	B
NOX	4.4	4.4	100	B
CO	3.6	3.6	100	B
VOC	1.82	1.82	100	B
HAP (single)	<10	<10	10	B
HAP (Total)	<25	<25	25	B

Table 10 UNCONTROLLED PTE AND PTE FOR HAZARDOUS AIR POLLUTANTS COMPARED TO THE MAJOR SOURCE THRESHOLDS

HAP Pollutant	Uncontrolled PTE (T/yr)	PTE (T/yr)	Major Source Thresholds (T/yr)	Uncontrolled PTE Exceeds the Major Source Threshold and PTE Exceeds the Major Source Threshold?
1,1,2,2-Tetrachloroethane	3.15E-06	3.15E-06	10	No
1,1,2-Trichloroethane	1.90E-06	1.90E-06	10	No
1,1-Dichloroethane	1.41E-06	1.41E-06	10	No
1,2-Dichloroethane	1.41E-06	1.41E-06	10	No
1,2-Dichloropropane	1.62E-06	1.62E-06	10	No
1,3-Butadiene	8.65E-05	8.65E-05	10	No
1,3-Dichloropropene	1.58E-06	1.58E-06	10	No
Acetaldehyde	4.27E-04	4.27E-04	10	No
Acrolein	3.37E-04	3.37E-04	10	No
Arsenic	7.22E-06	7.22E-06	10	No
Benzene	3.69E-04	3.69E-04	10	No
Beryllium	4.33E-07	4.33E-07	10	No
Cadmium	3.97E-05	3.97E-05	10	No
Carbon Tetrachloride	2.20E-06	2.20E-06	10	No
Chlorobenzene	1.61E-06	1.61E-06	10	No
Chloroform	1.70E-06	1.70E-06	10	No
Chromium	2.92E-04	2.92E-04	10	No
Cobalt	3.03E-06	3.03E-06	10	No
Dichlorobenzene	4.33E-05	4.33E-05	10	No
Ethyl benzene	3.06E-06	3.06E-06	10	No
Formaldehyde	5.38E-03	5.38E-03	10	No
Hexane	6.50E-02	6.50E-02	10	No
Manganese	1.40E-02	1.40E-02	10	No
Methanol	3.81E-04	3.81E-04	10	No
Naphthalene	4.29E-05	4.29E-05	10	No
Nickel	2.69E-04	2.69E-04	10	No
PAH	2.78E-05	2.78E-05	10	No
Selenium	8.66E-07	8.66E-07	10	No
Styrene	1.48E-06	1.48E-06	10	No
Toluene	2.34E-04	2.34E-04	10	No
Vinyl Chloride	8.93E-07	8.93E-07	10	No
Xylene (o-, m-, p-isomers)	5.38E-05	5.38E-05	10	No
Total	0.09	0.09	25	No

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 emissions sources. 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.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401 Tier II Operating Permit

The application was submitted for a permit to construct (refer to the Permit to Construct section), and an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400–410 were not applicable to this permitting action.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625 Visible Emissions

The sources of PM₁₀ 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 and 3.4

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 PM₁₀, SO₂, NO_x, CO, VOC, and HAP, 100,000 tons per year for CO₂e, 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)

The facility is subject to the requirements of 40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, and 40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.

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

§60.4200 Am I subject to this subpart?

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

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

- (i) 2007 or later, for engines that are not fire pump engines;
- (ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

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

- (i) Manufactured after April 1, 2006, and are not fire pump engines, or
- (ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

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

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

(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.

The fire-pump engine will be subject to this subpart.

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

(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.

(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.

(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) Areas of Alaska not accessible by the FAHS; 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.

The fire-pump engine will be required to comply with the emission standards in this subpart.

§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.

(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.

The fire-pump engine will be required to comply with the emission standards in this subpart.

§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 permittee will be required to operate and maintain the fire-pump engine so as to achieve the emission standards over the entire life of the 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?

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

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

(c) [Reserved]

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

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

The permittee will be required to use ULSD fuel with a maximum sulfur content of 15 ppmv.

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

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

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine 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.

(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.

The permittee will be required to comply with the applicable monitoring requirements.

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

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

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

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

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

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

(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.

(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.

(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.

The permittee will be required to operate and maintain the fire-pump engine according to the manufacturer's emission-related instructions.

Operation of the fire-pump engine will be required to comply with the requirements of 60.4211.

§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.

(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.

The fire-pump engine is an emergency stationary IC engine, thus an initial notification is not required.

Table 4 to Subpart III of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO _x	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+ ¹	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+ ¹	4.7 (3.5)		0.40 (0.30)

75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+ ²	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+ ³	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+ ³	<u>4.0 (3.0)</u>		<u>0.20 (0.15)</u>
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

¹For model years 2011-2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

²For model years 2010-2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

³In model years 2009-2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

The applicable standards are underlined in the Table.

40 CFR 60, Subpart JJJJStandards of Performance for Stationary Spark Ignition Internal Combustion Engines
§60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) 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 SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.

(2) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline fueled or that are rich burn engines fueled by liquefied petroleum gas (LPG), where the date of manufacture is:

- (i) On or after July 1, 2008; or
- (ii) On or after January 1, 2009, for emergency engines.

(3) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) On or after January 1, 2009, for emergency engines.

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

(5) Owners and operators of stationary SI ICE that are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006.

(6) The provisions of §60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction after June 12, 2006.

(b) The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine 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 as applicable.

(d) For the purposes of this subpart, stationary SI ICE using alcohol-based fuels are considered gasoline engines.

(e) Stationary SI 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 parts 90 and 1048, 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.

(f) Owners and operators of facilities with internal combustion engines 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.

The Generac emergency engine will be subject to this subpart.

§60.4231 What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as follows:

If engine displacement is * * *	and manufacturing dates are * * *	the engine must meet emission standards and related requirements for nonhandheld engines under * * *
(1) below 225 cc	July 1, 2008 to December 31, 2011	40 CFR part 90.
(2) below 225 cc	January 1, 2012 or later	40 CFR part 1054
(3) at or above 225 cc	July 1, 2008 to December 31, 2010	40 CFR part 90.
(4) at or above 225 cc	January 1, 2011 or later	40 CFR part 1054.

(b) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that use gasoline and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that use gasoline and that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cubic centimeters (cc) that use gasoline to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(c) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that are rich burn engines that use LPG and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP that are rich burn engines that use LPG and that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc that are rich burn engines that use LPG to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(d) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) under the voluntary manufacturer certification program described in this subpart must certify those engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers who choose to certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP (except gasoline and rich burn engines that use LPG), must certify those engines to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc (except gasoline and rich burn engines that use LPG) to the certification emission standards for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate. For stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) manufactured prior to January 1, 2011, manufacturers may choose to certify these engines to the standards in

Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP.

(e) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) under the voluntary manufacturer certification program described in this subpart must certify those engines to the emission standards in Table 1 to this subpart. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) that are lean burn engines that use LPG to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. For stationary SI ICE with a maximum engine power greater than or equal to 100 HP (75 KW) and less than 500 HP (373 KW) manufactured prior to January 1, 2011, and for stationary SI ICE with a maximum engine power greater than or equal to 500 HP (373 KW) manufactured prior to July 1, 2010, manufacturers may choose to certify these engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048 applicable to engines that are not severe duty engines.

(f) Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, to the extent they apply to equipment manufacturers.

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

The Generac emergency engine has a displacement of 2400 cc.

§60.4232 How long must my engines meet the emission standards if I am a manufacturer of stationary SI internal combustion engines?

Engines manufactured by stationary SI internal combustion engine manufacturers must meet the emission standards as required in §60.4231 during the certified emissions life of the engines.

§60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

(a) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008, must comply with the emission standards in §60.4231(a) for their stationary SI ICE.

(b) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that use gasoline must comply with the emission standards in §60.4231(b) for their stationary SI ICE.

(c) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that are rich burn engines that use LPG must comply with the emission standards in §60.4231(c) for their stationary SI ICE.

(d) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards for field testing in 40 CFR 1048.101(c) for their non-emergency stationary SI ICE and with the emission standards in Table 1 to this subpart for their emergency stationary SI ICE. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP, may optionally choose to meet those standards.

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon

monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

(f) Owners and operators of any modified or reconstructed stationary SI ICE subject to this subpart must meet the requirements as specified in paragraphs (f)(1) through (5) of this section.

(1) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with emission standards in §60.4231(a) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in §60.4231(a) applicable to engines manufactured on July 1, 2008.

(2) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline engines and are modified or reconstructed after June 12, 2006, must comply with the emission standards in §60.4231(b) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in §60.4231(b) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(3) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in §60.4231(c). Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in §60.4231(c) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(4) Owners and operators of stationary SI natural gas and lean burn LPG engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (d) or (e) of this section, except that such owners and operators of non-emergency engines and emergency engines greater than or equal to 130 HP must meet a nitrogen oxides (NO_x) emission standard of 3.0 grams per HP-hour (g/HP-hr), a CO emission standard of 4.0 g/HP-hr (5.0 g/HP-hr for non-emergency engines less than 100 HP), and a volatile organic compounds (VOC) emission standard of 1.0 g/HP-hr, or a NO_x emission standard of 250 ppmvd at 15 percent oxygen (O₂), a CO emission standard 540 ppmvd at 15 percent O₂ (675 ppmvd at 15 percent O₂ for non-emergency engines less than 100 HP), and a VOC emission standard of 86 ppmvd at 15 percent O₂, where the date of manufacture of the engine is:

(i) Prior to July 1, 2007, for non-emergency engines with a maximum engine power greater than or equal to 500 HP (except lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) Prior to July 1, 2008, for non-emergency engines with a maximum engine power less than 500 HP;

(iii) Prior to January 1, 2009, for emergency engines;

(iv) Prior to January 1, 2008, for non-emergency lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP.

(5) Owners and operators of stationary SI landfill/digester gas ICE engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (e) of this section for stationary landfill/digester gas engines. Engines with maximum engine power less than 500 HP and a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power less than 500 HP manufactured on July 1, 2008. Engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) and a date of manufacture prior to July 1, 2007 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) manufactured on July 1, 2007. Lean burn engines greater than or equal to 500 HP and less than 1,350 HP with a date of manufacture prior to January 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE that are lean burn engines greater than or equal to 500 HP and less than 1,350 HP and manufactured on January 1, 2008.

(g) Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that

the fuel has high sulfur levels that prevent the use of aftertreatment controls and also that the owner has reasonably made all attempts possible to obtain an engine that will meet the standards without the use of aftertreatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel.

(h) Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section.

The permittee will be required to comply with the applicable emission standards in 40 CFR part 1054.

§60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.

The permittee will be required to operate and maintain the Generac emergency engine to comply with the applicable emission standards over the entire life of the engine.

§60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?

Owners and operators of stationary SI ICE subject to this subpart that use gasoline must use gasoline that meets the per gallon sulfur limit in 40 CFR 80.195.

The permittee will be required to exclusively fuel the Generac emergency engine with fuel that complies with the applicable standards in 40 CFR 80.195.

§60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?

(a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(b) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(c) If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine.

§60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in §60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.

(1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.

(2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.

(i) If you are an owner or operator of a stationary SI internal combustion engine 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, but no performance testing is required if you are an owner or operator.

(ii) If you are an owner or operator of a stationary SI 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 within 1 year of engine startup to demonstrate compliance.

(iii) If you are an owner or operator of a stationary SI 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 within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 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.

(ii) If you are an owner or operator of a stationary SI 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 and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(c) If you are an owner or operator of a stationary SI internal combustion engine that must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according paragraph (b)(2)(i) or (ii) of this section, except that if you comply according to paragraph (b)(2)(i) of this section, you demonstrate that your non-certified engine complies with the emission standards specified in §60.4233(f).

(d) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(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 (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(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 (d)(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 (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(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 (d)(2) of this section. Except as provided in paragraph (d)(3)(i) of this section, the 50 hours per 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.

(ii) [Reserved]

(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.

(f) If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(g) It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

(h) If you are an owner/operator of a stationary SI internal combustion engine with maximum engine power greater than or equal to 500 HP that is manufactured after July 1, 2007 and before July 1, 2008, and must comply with the emission standards specified in sections 60.4233(b) or (c), you must comply by one of the methods specified in paragraphs (h)(1) through (h)(4) of this section.

(1) Purchasing an engine certified according to 40 CFR part 1048. 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.

(i) If you are an owner or operator of a modified or reconstructed stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according to one of the methods specified in paragraphs (i)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4233(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4244. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

The permittee will be required to keep a maintenance plan and records of conducted maintenance, and to maintain and operate the Generac emergency engine in a manner consistent with good air pollution control practices.

Operation of the Generac emergency engine will be required to comply with the requirements of 60.4243.

§60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

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

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

(b) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

(c) Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.

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

(2) The address of the affected source;

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

(4) Emission control equipment; and

(5) Fuel used.

(d) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.

(e) If you own or operate an emergency stationary SI 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 §60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in §60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (e)(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 §60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4243(d)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in §60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(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.

The permittee will be required to maintain records of the maintenance conducted on the Generac emergency engine.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT Applicability (40 CFR 63)

The facility has proposed to operate as a minor source of hazardous air pollutant (HAP) emissions, and may be subject to the following NESHAPs:

- 40 CFR 63, Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines

- 40 CFR 63, Subpart HHHHHH – NESHAP for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources
- 40 CFR 63, Subpart XXXXXX – NESHAP for Area Source Standards for Nine Metal Fabrication and Finishing Source Categories

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

§63.6585 Am I subject to this subpart?

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

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

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

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

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

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

(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).

The Generac emergency engine will be subject to this subpart.

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

This subpart applies to each affected source.

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

(1) *Existing stationary RICE.*

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

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

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

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

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

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

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

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

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

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

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in 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;

(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.

The Generac emergency engine will comply with this subpart by complying with 40 CFR part 60 subpart JJJJ.

**40 CFR 63, Subpart HHHHHH.....National Emission Standards for Hazardous Air Pollutants:
Paint Stripping and Miscellaneous Surface Coating
Operations at Area Sources**

§63.11170 Am I subject to this subpart?

(a) You are subject to this subpart if you operate an area source of HAP as defined in paragraph (b) of this section, including sources that are part of a tribal, local, State, or Federal facility and you perform one or more of the activities in paragraphs (a)(1) through (3) of this section:

(1) Perform paint stripping using MeCl for the removal of dried paint (including, but not limited to, paint, enamel, varnish, shellac, and lacquer) from wood, metal, plastic, and other substrates.

(2) Perform spray application of coatings, as defined in §63.11180, to motor vehicles and mobile equipment including operations that are located in stationary structures at fixed locations, and mobile repair and refinishing operations that travel to the customer's location, except spray coating applications that meet the definition of facility maintenance in §63.11180. However, if you are the owner or operator of a motor vehicle or mobile equipment surface coating operation, you may petition the Administrator for an exemption from this subpart if you can demonstrate, to the satisfaction of the Administrator, that you spray apply no coatings that contain the target HAP, as defined in §63.11180. Petitions must include a description of the coatings that you spray apply and your certification that you do not spray apply any coatings containing the target HAP. If circumstances change such that you intend to spray apply coatings containing the target HAP, you must submit the initial notification required by 63.11175 and comply with the requirements of this subpart.

(3) Perform spray application of coatings that contain the target HAP, as defined in §63.11180, to a plastic and/or metal substrate on a part or product, except spray coating applications that meet the definition of facility maintenance or space vehicle in §63.11180.

(b) An area source of HAP is a source of HAP that is not a major source of HAP, is not located at a major source, and is not part of a major source of HAP emissions. A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or

has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year, or emit any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year.

The facility would not be subject to the provisions of 40 CFR 63, Subpart HHHHHHH because the coatings that will be applied do not contain any target HAPs.

**40 CFR 63, Subpart XXXXXX.....National Emission Standards for Hazardous Air Pollutants:
Area Source Standards for Nine Metal Fabrication and
Finishing Source Categories**

§63.11514 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate an area source that is primarily engaged in the operations in one of the nine source categories listed in paragraphs (a)(1) through (9) of this section. Descriptions of these source categories are shown in Table 1 of this subpart. "Primarily engaged" is defined in §63.11522, "What definitions apply to this subpart?"

- (1) Electrical and Electronic Equipment Finishing Operations;
- (2) Fabricated Metal Products;
- (3) Fabricated Plate Work (Boiler Shops);
- (4) Fabricated Structural Metal Manufacturing;
- (5) Heating Equipment, except Electric;
- (6) Industrial Machinery and Equipment Finishing Operations;
- (7) Iron and Steel Forging;
- (8) Primary Metal Products Manufacturing; and
- (9) Valves and Pipe Fittings.

(b) The provisions of this subpart apply to each new and existing affected source listed and defined in paragraphs (b)(1) through (5) of this section if you use materials that contain or have the potential to emit metal fabrication or finishing metal HAP (MFHAP), defined to be the compounds of cadmium, chromium, lead, manganese, and nickel, or any of these metals in the elemental form with the exception of lead. Materials that contain MFHAP are defined to be materials that contain greater than 0.1 percent for carcinogens, as defined by OSHA at 29 CFR 1910.1200(d)(4), and greater than 1.0 percent for noncarcinogens. For the MFHAP, this corresponds to materials that contain cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (of the metal), and materials that contain manganese in amounts greater than or equal to 1.0 percent by weight (of the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material.

(1) A dry abrasive blasting affected source is the collection of all equipment and activities necessary to perform dry abrasive blasting operations which use materials that contain MFHAP or that have the potential to emit MFHAP.

(2) A machining affected source is the collection of all equipment and activities necessary to perform machining operations which use materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or that have the potential to emit MFHAP.

(3) A dry grinding and dry polishing with machines affected source is the collection of all equipment and activities necessary to perform dry grinding and dry polishing with machines operations which use materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or have the potential to emit MFHAP.

(4) A spray painting affected source is the collection of all equipment and activities necessary to perform spray-applied painting operations using paints which contain MFHAP. A spray painting affected source includes all equipment used to apply cleaning materials to a substrate to prepare it for paint application (surface preparation) or to remove dried paint; to apply a paint to a substrate (paint application) and to dry or cure the paint after application; or to clean paint operation equipment (equipment cleaning). Affected source(s) subject to the requirements of this paragraph are not subject to the miscellaneous surface coating provisions of subpart

HHHHHH of this part, "National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources."

(5) A welding affected source is the collection of all equipment and activities necessary to perform welding operations which use materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or have the potential to emit MFHAP.

(c) An affected source is existing if you commenced construction or reconstruction of the affected source, as defined in §63.2, "General Provisions" to part 63, before April 3, 2008.

(d) An affected source is new if you commenced construction or reconstruction of the affected source, as defined in §63.2, "General Provisions" to part 63, on or after April 3, 2008.

(e) This subpart does not apply to research or laboratory facilities, as defined in section 112(c)(7) of the Clean Air Act (CAA).

(f) This subpart does not apply to tool or equipment repair operations, facility maintenance, or quality control activities as defined in §63.11522, "What definitions apply to this subpart?"

(g) This subpart does not apply to operations performed on site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such state), the National Aeronautics and Space Administration, or the National Nuclear Security Administration.

(h) This subpart does not apply to operations that produce military munitions, as defined in §63.11522, "What definitions apply to this subpart?", manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such state), or equipment directly and exclusively used for the purposes of transporting military munitions.

(i) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

The facility is proposing to construct a source that will use materials that contain or have the potential to emit metal fabrication or finishing HAP and is therefore subject to this subpart.

Dry abrasive blasting operations will include materials that contain the following MFHAP: chromium, manganese, nickel.

Spray applied coatings will not contain MFHAP and therefore are not subject to this subpart.

Welding operations will include materials that contain the following MFHAP: chromium, manganese, nickel.

Construction of the facility will commence in 2015, therefore the facility is considered to be new.

§63.11515 What are my compliance dates?

(a) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions in this subpart by July 25, 2011.

(b) If you own or operate a new affected source, you must achieve compliance with the applicable provisions in this subpart by July 23, 2008, or upon startup of your affected source, whichever is later.

The facility will be required to be in compliance upon commencement of operations.

§63.11516 What are my standards and management practices?

(a) Dry abrasive blasting standards. If you own or operate a new or existing dry abrasive blasting affected source, you must comply with the requirements in paragraphs (a)(1) through (3) of this section, as applicable, for each dry abrasive blasting operation that uses materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or has the potential to emit MFHAP. These requirements do not apply when abrasive blasting operations are being performed that do not use any materials containing MFHAP or do not have the potential to emit MFHAP.

(1) *Standards for dry abrasive blasting of objects performed in totally enclosed and unvented blast chambers.* If you own or operate a new or existing dry abrasive blasting affected source which consists of an

abrasive blasting chamber that is totally enclosed and unvented, as defined in §63.11522, "What definitions apply to this subpart?", you must implement management practices to minimize emissions of MFHAP. These management practices are the practices specified in paragraph (a)(1)(i) and (ii) of this section.

(i) You must minimize dust generation during emptying of abrasive blasting enclosures; and

(ii) You must operate all equipment associated with dry abrasive blasting operations according to the manufacturer's instructions.

(2) *Standards for dry abrasive blasting of objects performed in vented enclosures.* If you own or operate a new or existing dry abrasive blasting affected source which consists of a dry abrasive blasting operation which has a vent allowing any air or blast material to escape, you must comply with the requirements in paragraphs (a)(2)(i) and (ii) of this section. Dry abrasive blasting operations for which the items to be blasted exceed 8 feet (2.4 meters) in any dimension, may be performed subject to the requirements in paragraph (a)(3) of this section.

(i) You must capture emissions and vent them to a filtration control device. You must operate the filtration control device according to manufacturer's instructions, and you must demonstrate compliance with this requirement by maintaining a record of the manufacturer's specifications for the filtration control devices, as specified by the requirements in §63.11519(c)(4), "What are my notification, recordkeeping, and reporting requirements?"

(ii) You must implement the management practices to minimize emissions of MFHAP as specified in paragraphs (a)(2)(ii)(A) through (C) of this section.

(A) You must take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions, as practicable; and

(B) You must enclose dusty abrasive material storage areas and holding bins, seal chutes and conveyors that transport abrasive materials; and

(C) You must operate all equipment associated with dry abrasive blasting operations according to manufacturer's instructions.

(3) *Standards for dry abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension.* If you own or operate a new or existing dry abrasive blasting affected source which consists of a dry abrasive blasting operation which is performed on objects greater than 8 feet (2.4 meters) in any one dimension, you may implement management practices to minimize emissions of MFHAP as specified in paragraph (a)(3)(i) of this section instead of the practices required by paragraph (a)(2) of this section. You must demonstrate that management practices are being implemented by complying with the requirements in paragraphs (a)(3)(ii) through (iv) of this section.

(i) Management practices for dry abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension are specified in paragraphs (a)(3)(i)(A) through (E) of this section.

(A) You must take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions, as practicable; and

(B) You must enclose abrasive material storage areas and holding bins, seal chutes and conveyors that transport abrasive material; and

(C) You must operate all equipment associated with dry abrasive blasting operations according to manufacturer's instructions; and

(D) You must not re-use dry abrasive blasting media unless contaminants (i.e., any material other than the base metal, such as paint residue) have been removed by filtration or screening, and the abrasive material conforms to its original size; and

(E) Whenever practicable, you must switch from high particulate matter (PM)-emitting blast media (e.g., sand) to low PM-emitting blast media (e.g., crushed glass, specular hematite, steel shot, aluminum oxide), where PM is a surrogate for MFHAP.

(ii) You must perform visual determinations of fugitive emissions, as specified in §63.11517(b), "What are my monitoring requirements?", according to paragraphs (a)(3)(ii)(A) or (B) of this section, as applicable.

(A) For abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension that is performed outdoors, you must perform visual determinations of fugitive emissions at the fenceline or property border nearest to the outdoor dry abrasive blasting operation.

(B) For abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension that is performed indoors, you must perform visual determinations of fugitive emissions at the primary vent, stack, exit, or opening from the building containing the abrasive blasting operations.

(iii) You must keep a record of all visual determinations of fugitive emissions along with any corrective action taken in accordance with the requirements in §63.11519(c)(2), "What are my notification, recordkeeping, and reporting requirements?"

(iv) If visible fugitive emissions are detected, you must perform corrective actions until the visible fugitive emissions are eliminated, at which time you must comply with the requirements in paragraphs (a)(3)(iv)(A) and (B) of this section.

(A) You must perform a follow-up inspection for visible fugitive emissions in accordance with §63.11517(a), "Monitoring Requirements."

(B) You must report all instances where visible emissions are detected, along with any corrective action taken and the results of subsequent follow-up inspections for visible emissions, with your annual certification and compliance report as required by §63.11519(b)(5), "Notification, recordkeeping, and reporting requirements."

(b) Standards for machining. If you own or operate a new or existing machining affected source, you must implement management practices to minimize emissions of MFHAP as specified in paragraph (b)(1) and (2) of this section for each machining operation that uses materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or has the potential to emit MFHAP. These requirements do not apply when machining operations are being performed that do not use any materials containing MFHAP and do not have the potential to emit MFHAP.

(1) You must take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions, as practicable; and

(2) You must operate all equipment associated with machining according to manufacturer's instructions.

(c) Standards for dry grinding and dry polishing with machines. If you own or operate a new or existing dry grinding and dry polishing with machines affected source, you must comply with the requirements of paragraphs (c)(1) and (2) of this section for each dry grinding and dry polishing with machines operation that uses materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or has the potential to emit MFHAP. These requirements do not apply when dry grinding and dry polishing operations are being performed that do not use any materials containing MFHAP and do not have the potential to emit MFHAP.

(1) You must capture emissions and vent them to a filtration control device. You must demonstrate compliance with this requirement by maintaining a record of the manufacturer's specifications for the filtration control devices, as specified by the requirements in §63.11519(c)(4), "Notification, recordkeeping, and reporting Requirements."

(2) You must implement management practices to minimize emissions of MFHAP as specified in paragraphs (c)(2)(i) and (ii) of this section.

(i) You must take measures necessary to minimize excess dust in the surrounding area to reduce MFHAP emissions, as practicable;

(ii) You must operate all equipment associated with the operation of dry grinding and dry polishing with machines, including the filtration control device, according to manufacturer's instructions.

(d) Standards for control of MFHAP in spray painting. If you own or operate a new or existing spray painting affected source, as defined in §63.11514 (b)(4), "Am I subject to this subpart?," you must implement the management practices in paragraphs (d)(1) through (9) of this section when a spray-applied paint that contains MFHAP is being applied. These requirements do not apply when spray-applied paints that do not contain MFHAP are being applied.

(1) *Standards for spray painting for MFHAP control.* All spray-applied painting of objects must meet the requirements of paragraphs (d)(1)(i) through (iii) of this section. These requirements do not apply to affected sources located at Fabricated Structural Metal Manufacturing facilities, as described in Table 1, "Description of Source Categories Affected by this Subpart," or affected sources that spray paint objects greater than 15 feet (4.57 meters), that are not spray painted in spray booths or spray rooms.

(i) Spray booths or spray rooms must have a full roof, at least two complete walls, and one or two complete side curtains or other barrier material so that all four sides are covered. The spray booths or spray rooms must be

ventilated so that air is drawn into the booth and leaves only through the filter. The roof may contain narrow slots for connecting fabricated products to overhead cranes, and/or for cords or cables.

(ii) All spray booths or spray rooms must be fitted with a type of filter technology that is demonstrated to achieve at least 98 percent capture of MFHAP. The procedure used to demonstrate filter efficiency must be consistent with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.1, "Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, June 4, 1992" (incorporated by reference, see §63.14). The test coating for measuring filter efficiency shall be a high-solids bake enamel delivered at a rate of at least 135 grams per minute from a conventional (non-High Volume Low Pressure) air-atomized spray gun operating at 40 psi air pressure; the air flow rate across the filter shall be 150 feet per minute. Owners and operators may use published filter efficiency data provided by filter vendors to demonstrate compliance with this requirement and are not required to perform this measurement.

(iii) You must perform regular inspection and replacement of the filters in all spray booths or spray rooms according to manufacturer's instructions, and maintain documentation of these activities, as detailed in §63.11519(c)(5), "Notification, recordkeeping, and reporting requirements."

(iv) As an alternative compliance requirement, spray booths or spray rooms equipped with a water curtain, called "waterwash" or "waterspray" booths or spray rooms that are operated and maintained according to the manufacturer's specifications and that achieve at least 98 percent control of MFHAP, may be used in lieu of the spray booths or spray rooms requirements of paragraphs (d)(1)(i) through (iii) of this section.

(2) *Standards for spray painting application equipment of all objects painted for MFHAP control.* All paints applied via spray-applied painting must be applied with a high-volume, low-pressure (HVLP) spray gun, electrostatic application, airless spray gun, air-assisted airless spray gun, or an equivalent technology that is demonstrated to achieve transfer efficiency comparable to one of these spray gun technologies for a comparable operation, and for which written approval has been obtained from the Administrator. The procedure used to demonstrate that spray gun transfer efficiency is equivalent to that of an HVLP spray gun must be equivalent to the California South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989" and "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002", Revision 0 (incorporated by reference, see §63.14).

(3) *Spray system recordkeeping.* You must maintain documentation of the HVLP or other high transfer efficiency spray paint delivery methods, as detailed in §63.11519(c)(7), "Notification, recordkeeping, and reporting requirements."

(4) *Spray gun cleaning.* All cleaning of paint spray guns must be done with either non-HAP gun cleaning solvents, or in such a manner that an atomized mist of spray of gun cleaning solvent and paint residue is not created outside of a container that collects the used gun cleaning solvent. Spray gun cleaning may be done with, for example, by hand cleaning of parts of the disassembled gun in a container of solvent, by flushing solvent through the gun without atomizing the solvent and paint residue, or by using a fully enclosed spray gun washer. A combination of these non-atomizing methods may also be used.

(5) *Spray painting worker certification.* All workers performing painting must be certified that they have completed training in the proper spray application of paints and the proper setup and maintenance of spray equipment. The minimum requirements for training and certification are described in paragraph (d)(6) of this section. The spray application of paint is prohibited by persons who are not certified as having completed the training described in paragraph (d)(6) of this section. The requirements of this paragraph do not apply to the students of an accredited painting training program who are under the direct supervision of an instructor who meets the requirements of this paragraph. The requirements of this paragraph do not apply to operators of robotic or automated painting operations.

(6) *Spray painting training program content.* Each owner or operator of an affected spray painting affected source must ensure and certify that all new and existing personnel, including contract personnel, who spray apply paints are trained in the proper application of paints as required by paragraph (d)(5) of this section. The training program must include, at a minimum, the items listed in paragraphs (d)(6)(i) through (iii) of this section.

(i) A list of all current personnel by name and job description who are required to be trained;

(ii) Hands-on, or in-house or external classroom instruction that addresses, at a minimum, initial and refresher training in the topics listed in paragraphs (d)(6)(ii)(A) through (D) of this section.

(A) Spray gun equipment selection, set up, and operation, including measuring paint viscosity, selecting the proper fluid tip or nozzle, and achieving the proper spray pattern, air pressure and volume, and fluid delivery rate.

(B) Spray technique for different types of paints to improve transfer efficiency and minimize paint usage and overspray, including maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke.

(C) Routine spray booth and filter maintenance, including filter selection and installation.

(D) Environmental compliance with the requirements of this subpart.

(iii) A description of the methods to be used at the completion of initial or refresher training to demonstrate, document, and provide certification of successful completion of the required training. Alternatively, owners and operators who can show by documentation or certification that a painter's work experience and/or training has resulted in training equivalent to the training required in paragraph (d)(6)(ii) of this section are not required to provide the initial training required by that paragraph to these painters.

(7) *Records of spray painting training.* You must maintain records of employee training certification for use of HVLP or other high transfer efficiency spray paint delivery methods as detailed in §63.11519(c)(8), "Notification, recordkeeping, and reporting requirements."

(8) *Spray painting training dates.* As required by paragraph (d)(5) of this section, all new and existing personnel at an affected spray painting affected source, including contract personnel, who spray apply paints must be trained by the dates specified in paragraphs (d)(8)(i) and (ii) of this section.

(i) If your source is a new source, all personnel must be trained and certified no later than January 20, 2009, 180 days after startup, or 180 days after hiring, whichever is later. Training that was completed within 5 years prior to the date training is required, and that meets the requirements specified in paragraph (d)(6)(ii) of this section satisfies this requirement and is valid for a period not to exceed 5 years after the date the training is completed.

(ii) If your source is an existing source, all personnel must be trained and certified no later than July 25, 2011, or 180 days after hiring, whichever is later. Worker training that was completed within 5 years prior to the date training is required, and that meets the requirements specified in paragraph (d)(6)(ii) of this section, satisfies this requirement and is valid for a period not to exceed 5 years after the date the training is completed.

(9) *Duration of training validity.* Training and certification will be valid for a period not to exceed 5 years after the date the training is completed. All personnel must receive refresher training that meets the requirements of this section and be re-certified every 5 years.

(e) [Reserved]

(f) *Standards for welding.* If you own or operate a new or existing welding affected source, you must comply with the requirements in paragraphs (f)(1) and (2) of this section for each welding operation that uses materials that contain MFHAP, as defined in §63.11522, "What definitions apply to this subpart?", or has the potential to emit MFHAP. If your welding affected source uses 2,000 pounds or more per year of welding rod containing one or more MFHAP (calculated on a rolling 12-month basis), you must demonstrate that management practices or fume control measures are being implemented by complying with the requirements in paragraphs (f)(3) through (8) of this section. The requirements in paragraphs (f)(1) through (8) of this section do not apply when welding operations are being performed that do not use any materials containing MFHAP or do not have the potential to emit MFHAP.

(1) You must operate all equipment, capture, and control devices associated with welding operations according to manufacturer's instructions. You must demonstrate compliance with this requirement by maintaining a record of the manufacturer's specifications for the capture and control devices, as specified by the requirements in §63.11519(c)(4), "Notification, recordkeeping, and reporting requirements."

(2) You must implement one or more of the management practices specified in paragraphs (f)(2)(i) through (v) of this section to minimize emissions of MFHAP, as practicable, while maintaining the required welding quality through the application of sound engineering judgment.

(i) Use welding processes with reduced fume generation capabilities (e.g., gas metal arc welding (GMAW)—also called metal inert gas welding (MIG));

(ii) Use welding process variations (e.g., pulsed current GMAW), which can reduce fume generation rates;

(iii) Use welding filler metals, shielding gases, carrier gases, or other process materials which are capable of reduced welding fume generation;

(iv) Optimize welding process variables (e.g., electrode diameter, voltage, amperage, welding angle, shield gas flow rate, travel speed) to reduce the amount of welding fume generated; and

(v) Use a welding fume capture and control system, operated according to the manufacturer's specifications.

(3) Tier 1 compliance requirements for welding. You must perform visual determinations of welding fugitive emissions as specified in §63.11517(b), "Monitoring requirements," at the primary vent, stack, exit, or opening from the building containing the welding operations. You must keep a record of all visual determinations of fugitive emissions along with any corrective action taken in accordance with the requirements in §63.11519(c)(2), "Notification, recordkeeping, and reporting requirements."

(4) Requirements upon initial detection of visible emissions from welding. If visible fugitive emissions are detected during any visual determination required in paragraph (f)(3) of this section, you must comply with the requirements in paragraphs (f)(4)(i) and (ii) of this section.

(i) Perform corrective actions that include, but are not limited to, inspection of welding fume sources, and evaluation of the proper operation and effectiveness of the management practices or fume control measures implemented in accordance with paragraph (f)(2) of this section. After completing such corrective actions, you must perform a follow-up inspection for visible fugitive emissions in accordance with §63.11517(a), "Monitoring Requirements," at the primary vent, stack, exit, or opening from the building containing the welding operations.

(ii) Report all instances where visible emissions are detected, along with any corrective action taken and the results of subsequent follow-up inspections for visible emissions, and submit with your annual certification and compliance report as required by §63.11519(b)(5), "Notification, recordkeeping, and reporting requirements."

(5) Tier 2 requirements upon subsequent detection of visible emissions. If visible fugitive emissions are detected more than once during any consecutive 12 month period (notwithstanding the results of any follow-up inspections), you must comply with paragraphs (f)(5)(i) through (iv) of this section.

(i) Within 24 hours of the end of the visual determination of fugitive emissions in which visible fugitive emissions were detected, you must conduct a visual determination of emissions opacity, as specified in §63.11517(c), "Monitoring requirements," at the primary vent, stack, exit, or opening from the building containing the welding operations.

(ii) In lieu of the requirement of paragraph (f)(3) of this section to perform visual determinations of fugitive emissions with EPA Method 22, you must perform visual determinations of emissions opacity in accordance with §63.11517(d), "Monitoring Requirements," using EPA Method 9, at the primary vent, stack, exit, or opening from the building containing the welding operations.

(iii) You must keep a record of each visual determination of emissions opacity performed in accordance with paragraphs (f)(5)(i) or (ii) of this section, along with any subsequent corrective action taken, in accordance with the requirements in §63.11519(c)(3), "Notification, recordkeeping, and reporting requirements."

(iv) You must report the results of all visual determinations of emissions opacity performed in accordance with paragraphs (f)(5)(i) or (ii) of this section, along with any subsequent corrective action taken, and submit with your annual certification and compliance report as required by §63.11519(b)(6), "Notification, recordkeeping, and reporting requirements."

(6) Requirements for opacities less than or equal to 20 percent but greater than zero. For each visual determination of emissions opacity performed in accordance with paragraph (f)(5) of this section for which the average of the six-minute average opacities recorded is 20 percent or less but greater than zero, you must perform corrective actions, including inspection of all welding fume sources, and evaluation of the proper operation and effectiveness of the management practices or fume control measures implemented in accordance with paragraph (f)(2) of this section.

(7) Tier 3 requirements for opacities exceeding 20 percent. For each visual determination of emissions opacity performed in accordance with paragraph (f)(5) of this section for which the average of the six-minute average opacities recorded exceeds 20 percent, you must comply with the requirements in paragraphs (f)(7)(i) through (v) of this section.

(i) You must submit a report of exceedance of 20 percent opacity, along with your annual certification and compliance report, as specified in §63.11519(b)(8), "Notification, recordkeeping, and reporting requirements," and according to the requirements of §63.11519(b)(1), "Notification, recordkeeping, and reporting requirements."

(ii) Within 30 days of the opacity exceedance, you must prepare and implement a Site-Specific Welding Emissions Management Plan, as specified in paragraph (f)(8) of this section. If you have already prepared a Site-Specific Welding Emissions Management Plan in accordance with this paragraph, you must prepare and implement a revised Site-Specific Welding Emissions Management Plan within 30 days.

(iii) During the preparation (or revision) of the Site-Specific Welding Emissions Management Plan, you must continue to perform visual determinations of emissions opacity, beginning on a daily schedule as specified in §63.11517(d), "Monitoring Requirements," using EPA Method 9, at the primary vent, stack, exit, or opening from the building containing the welding operations.

(iv) You must maintain records of daily visual determinations of emissions opacity performed in accordance with paragraph (f)(7)(iii) of this section, during preparation of the Site-Specific Welding Emissions Management Plan, in accordance with the requirements in §63.11519(b)(9), "Notification, recordkeeping, and reporting requirements."

(v) You must include these records in your annual certification and compliance report, according to the requirements of §63.11519(b)(1), "Notification, recordkeeping, and reporting requirements."

(8) *Site-Specific Welding Emissions Management Plan.* The Site-Specific Welding Emissions Management Plan must comply with the requirements in paragraphs (f)(8)(i) through (iii) of this section.

(i) Site-Specific Welding Emissions Management Plan must contain the information in paragraphs (f)(8)(i)(A) through (F) of this section.

(A) Company name and address;

(B) A list and description of all welding operations which currently comprise the welding affected source;

(C) A description of all management practices and/or fume control methods in place at the time of the opacity exceedance;

(D) A list and description of all management practices and/or fume control methods currently employed for the welding affected source;

(E) A description of additional management practices and/or fume control methods to be implemented pursuant to paragraph (f)(7)(ii) of this section, and the projected date of implementation; and

(F) Any revisions to a Site-Specific Welding Emissions Management Plan must contain copies of all previous plan entries, pursuant to paragraphs (f)(8)(i)(D) and (E) of this section.

(ii) The Site-Specific Welding Emissions Management Plan must be updated annually to contain current information, as required by paragraphs (f)(8)(i)(A) through (C) of this section, and submitted with your annual certification and compliance report, according to the requirements of §63.11519(b)(1), "Notification, recordkeeping, and reporting requirements."

(iii) You must maintain a copy of the current Site-Specific Welding Emissions Management Plan in your records in a readily-accessible location for inspector review, in accordance with the requirements in §63.11519(c)(12), "Notification, recordkeeping, and reporting requirements."

The facility will be required to comply with the applicable standards and management practices in this subpart.

§63.11517 What are my monitoring requirements?

(a) Visual determination of fugitive emissions, general. Visual determination of fugitive emissions must be performed according to the procedures of EPA Method 22, of 40 CFR part 60, Appendix A-7. You must conduct the EPA Method 22 test while the affected source is operating under normal conditions. The duration of each EPA Method 22 test must be at least 15 minutes, and visible emissions will be considered to be present if they are detected for more than six minutes of the fifteen minute period.

(b) Visual determination of fugitive emissions, graduated schedule. Visual determinations of fugitive emissions must be performed in accordance with paragraph (a) of this section and according to the schedule in paragraphs (b)(1) through (4) of this section.

(1) Daily Method 22 Testing. Perform visual determination of fugitive emissions once per day, on each day the process is in operation, during operation of the process.

(2) *Weekly Method 22 Testing.* If no visible fugitive emissions are detected in consecutive daily EPA Method 22 tests, performed in accordance with paragraph (b)(1) of this section for 10 days of work day operation of the process, you may decrease the frequency of EPA Method 22 testing to once every five days of operation of the process (one calendar week). If visible fugitive emissions are detected during these tests, you must resume EPA Method 22 testing of that operation once per day during each day that the process is in operation, in accordance with paragraph (b)(1) of this section.

(3) *Monthly Method 22 Testing.* If no visible fugitive emissions are detected in four consecutive weekly EPA Method 22 tests performed in accordance with paragraph (b)(2) of this section, you may decrease the frequency of EPA Method 22 testing to once per 21 days of operation of the process (one calendar month). If visible fugitive emissions are detected during these tests, you must resume weekly EPA Method 22 in accordance with paragraph (b)(2) of this section.

(4) *Quarterly Method 22 Testing.* If no visible fugitive emissions are detected in three consecutive monthly EPA Method 22 tests performed in accordance with paragraph (b)(3) of this section, you may decrease the frequency of EPA Method 22 testing to once per 60 days of operation of the process (3 calendar months). If visible fugitive emissions are detected during these tests, you must resume monthly EPA Method 22 in accordance with paragraph (b)(3) of this section.

(c) *Visual determination of emissions opacity for welding Tier 2 or 3, general.* Visual determination of emissions opacity must be performed in accordance with the procedures of EPA Method 9, of 40 CFR part 60, Appendix A-4, and while the affected source is operating under normal conditions. The duration of the EPA Method 9 test shall be thirty minutes.

(d) *Visual determination of emissions opacity for welding Tier 2 or 3, graduated schedule.* You must perform visual determination of emissions opacity in accordance with paragraph (c) of this section and according to the schedule in paragraphs (d)(1) through (5) of this section.

(1) *Daily Method 9 testing for welding, Tier 2 or 3.* Perform visual determination of emissions opacity once per day during each day that the process is in operation.

(2) *Weekly Method 9 testing for welding, Tier 2 or 3.* If the average of the six minute opacities recorded during any of the daily consecutive EPA Method 9 tests performed in accordance with paragraph (d)(1) of this section does not exceed 20 percent for 10 days of operation of the process, you may decrease the frequency of EPA Method 9 testing to once per five days of consecutive work day operation. If opacity greater than 20 percent is detected during any of these tests, you must resume testing every day of operation of the process according to the requirements of paragraph (d)(1) of this section.

(3) *Monthly Method 9 testing for welding Tier 2 or 3.* If the average of the six minute opacities recorded during any of the consecutive weekly EPA Method 9 tests performed in accordance with paragraph (d)(2) of this section does not exceed 20 percent for four consecutive weekly tests, you may decrease the frequency of EPA Method 9 testing to once per every 21 days of operation of the process. If visible emissions opacity greater than 20 percent is detected during any monthly test, you must resume testing every five days of operation of the process according to the requirements of paragraph (d)(2) of this section.

(4) *Quarterly Method 9 testing for welding Tier 2 or 3.* If the average of the six minute opacities recorded during any of the consecutive weekly EPA Method 9 tests performed in accordance with paragraph (d)(3) of this section does not exceed 20 percent for three consecutive monthly tests, you may decrease the frequency of EPA Method 9 testing to once per every 120 days of operation of the process. If visible emissions opacity greater than 20 percent is detected during any quarterly test, you must resume testing every 21 days (month) of operation of the process according to the requirements of paragraph (d)(3) of this section.

(5) *Return to Method 22 testing for welding, Tier 2 or 3.* If, after two consecutive months of testing, the average of the six minute opacities recorded during any of the monthly EPA Method 9 tests performed in accordance with paragraph (d)(3) of this section does not exceed 20 percent, you may resume EPA Method 22 testing as in paragraphs (b)(3) and (4) of this section. In lieu of this, you may elect to continue performing EPA Method 9 tests in accordance with paragraphs (d)(3) and (4) of this section.

The facility will be required to conduct the applicable monitoring required by the subpart.

§63.11519 What are my notification, recordkeeping, and reporting requirements?

(a) What notifications must I submit?—(1) Initial notification. If you are the owner or operator of an area source in one of the nine metal fabrication and finishing source categories, as defined in §63.11514 "Am I subject to this subpart?," you must submit the Initial Notification required by §63.9(b) "General Provisions," for a new affected source no later than 120 days after initial startup or November 20, 2008, whichever is later. For an existing affected source, you must submit the Initial Notification no later than July 25, 2011. Your Initial Notification must provide the information specified in paragraphs (a)(1)(i) through (iv) of this section.

(i) The name, address, phone number and e-mail address of the owner and operator;

(ii) The address (physical location) of the affected source;

(iii) An identification of the relevant standard (i.e., this subpart); and

(iv) A brief description of the type of operation. For example, a brief characterization of the types of products (e.g., aerospace components, sports equipment, etc.), the number and type of processes, and the number of workers usually employed.

(2) Notification of compliance status. If you are the owner or operator of an existing affected source, you must submit a notification of compliance status on or before November 22, 2011. If you are the owner or operator of a new affected source, you must submit a notification of compliance status within 120 days after initial startup, or by November 20, 2008, whichever is later. You are required to submit the information specified in paragraphs (a)(2)(i) through (iv) of this section with your notification of compliance status:

(i) Your company's name and address;

(ii) A statement by a responsible official with that official's name, title, phone number, e-mail address and signature, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart;

(iii) If you operate any spray painting affected sources, the information required by §63.11516(e)(3)(vi)(C), "Compliance demonstration," or §63.11516(e)(4)(ix)(C), "Compliance demonstration," as applicable; and

(iv) The date of the notification of compliance status.

(b) What reports must I prepare or submit?—(1) Annual certification and compliance reports. You must prepare and submit annual certification and compliance reports for each affected source according to the requirements of paragraphs (b)(2) through (7) of this section. The annual certification and compliance reporting requirements may be satisfied by reports required under other parts of the CAA, as specified in paragraph (b)(3) of this section.

(2) Dates. Unless the Administrator has approved or agreed to a different schedule for submission of reports under §63.10(a), "General Provisions," you must prepare and submit each annual certification and compliance report according to the dates specified in paragraphs (b)(2)(i) through (iii) of this section. Note that the information reported for each of the months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(i) The first annual certification and compliance report must cover the first annual reporting period which begins the day after the compliance date and ends on December 31.

(ii) Each subsequent annual certification and compliance report must cover the subsequent semiannual reporting period from January 1 through December 31.

(iii) Each annual certification and compliance report must be prepared and submitted no later than January 31 and kept in a readily-accessible location for inspector review. If an exceedance has occurred during the year, each annual certification and compliance report must be submitted along with the exceedance reports, and postmarked or delivered no later than January 31.

(3) Alternate dates. For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, "Title V."

(i) If the permitting authority has established dates for submitting annual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), "Title V," you may prepare or submit, if required, the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the date specified in paragraph (b)(2)(iii) of this section.

(ii) If an affected source prepares or submits an annual certification and compliance report pursuant to this section along with, or as part of, the monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), "Title V," and the compliance report includes all required information concerning exceedences of any limitation in this subpart, its submission will be deemed to satisfy any obligation to report the same exceedences in the annual monitoring report. However, submission of an annual certification and compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

(4) General requirements. The annual certification and compliance report must contain the information specified in paragraphs (b)(4)(i) through (iii) of this section, and the information specified in paragraphs (b)(5) through (7) of this section that is applicable to each affected source.

(i) Company name and address;

(ii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report; and

(iii) Date of report and beginning and ending dates of the reporting period. The reporting period is the 12-month period ending on December 31. Note that the information reported for the 12 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.

(5) Visual determination of fugitive emissions requirements. The annual certification and compliance report must contain the information specified in paragraphs (b)(5)(i) through (iii) of this section for each affected source which performs visual determination of fugitive emissions in accordance with §63.11517(a), "Monitoring requirements."

(i) The date of every visual determination of fugitive emissions which resulted in detection of visible emissions;

(ii) A description of the corrective actions taken subsequent to the test; and

(iii) The date and results of the follow-up visual determination of fugitive emissions performed after the corrective actions.

(6) Visual determination of emissions opacity requirements. The annual certification and compliance report must contain the information specified in paragraphs (b)(6)(i) through (iii) of this section for each affected source which performs visual determination of emissions opacity in accordance with §63.11517(c), "Monitoring requirements."

(i) The date of every visual determination of emissions opacity;

(ii) The average of the six-minute opacities measured by the test; and

(iii) A description of any corrective action taken subsequent to the test.

(7) [Reserved]

(8) Exceedances of 20 percent opacity for welding affected sources. As required by §63.11516(f)(7)(i), "Requirements for opacities exceeding 20 percent," you must prepare an exceedence report whenever the average of the six-minute average opacities recorded during a visual determination of emissions opacity exceeds 20 percent. This report must be submitted along with your annual certification and compliance report according to the requirements in paragraph (b)(1) of this section, and must contain the information in paragraphs (b)(8)(iii)(A) and (B) of this section.

(A) The date on which the exceedance occurred; and

(B) The average of the six-minute average opacities recorded during the visual determination of emissions opacity.

(9) Site-specific Welding Emissions Management Plan reporting. You must submit a copy of the records of daily visual determinations of emissions recorded in accordance with §63.11516(f)(7)(iv), "Tier 3 requirements for opacities exceeding 20 percent," and a copy of your Site-Specific Welding Emissions Management Plan and any subsequent revisions to the plan pursuant to §63.11516(f)(8), "Site-specific Welding Emission Management Plan," along with your annual certification and compliance report, according to the requirements in paragraph (b)(1) of this section.

(c) What records must I keep? You must collect and keep records of the data and information specified in paragraphs (c)(1) through (13) of this section, according to the requirements in paragraph (c)(14) of this section.

(1) *General compliance and applicability records.* Maintain information specified in paragraphs (c)(1)(i) through (ii) of this section for each affected source.

(i) Each notification and report that you submitted to comply with this subpart, and the documentation supporting each notification and report.

(ii) Records of the applicability determinations as in §63.11514(b)(1) through (5), "Am I subject to this subpart," listing equipment included in its affected source, as well as any changes to that and on what date they occurred, must be maintained for 5 years and be made available for inspector review at any time.

(2) *Visual determination of fugitive emissions records.* Maintain a record of the information specified in paragraphs (c)(2)(i) through (iii) of this section for each affected source which performs visual determination of fugitive emissions in accordance with §63.11517(a), "Monitoring requirements."

(i) The date and results of every visual determination of fugitive emissions;

(ii) A description of any corrective action taken subsequent to the test; and

(iii) The date and results of any follow-up visual determination of fugitive emissions performed after the corrective actions.

(3) *Visual determination of emissions opacity records.* Maintain a record of the information specified in paragraphs (c)(3)(i) through (iii) of this section for each affected source which performs visual determination of emissions opacity in accordance with §63.11517(c), "Monitoring requirements."

(i) The date of every visual determination of emissions opacity; and

(ii) The average of the six-minute opacities measured by the test; and

(iii) A description of any corrective action taken subsequent to the test.

(4) Maintain a record of the manufacturer's specifications for the control devices used to comply with §63.11516, "What are my standards and management practices?"

(5) *Spray paint booth filter records.* Maintain a record of the filter efficiency demonstrations and spray paint booth filter maintenance activities, performed in accordance with §63.11516(d)(1)(ii) and (iii), "Requirements for spray painting objects in spray booths or spray rooms."

(6) *Waterspray booth or water curtain efficiency tests.* Maintain a record of the water curtain efficiency demonstrations performed in accordance with §63.11516(d)(1)(ii), "Requirements for spray painting objects in spray booths or spray rooms."

(7) *HVLP or other high transfer efficiency spray delivery system documentation records.* Maintain documentation of HVLP or other high transfer efficiency spray paint delivery systems, in compliance with §63.11516(d)(3), "Requirements for spray painting of all objects." This documentation must include the manufacturer's specifications for the equipment and any manufacturer's operation instructions. If you have obtained written approval for an alternative spray application system in accordance with §63.11516(d)(2), "Spray painting of all objects," you must maintain a record of that approval along with documentation of the demonstration of equivalency.

(8) *HVLP or other high transfer efficiency spray delivery system employee training documentation records.* Maintain certification that each worker performing spray painting operations has completed the training specified in §63.11516(d)(6), "Requirements for spray painting of all objects," with the date the initial training and the most recent refresher training was completed.

(9)-(10) [Reserved]

(11) *Visual determination of emissions opacity performed during the preparation (or revision) of the Site-Specific Welding Emissions Management Plan.* You must maintain a record of each visual determination of emissions opacity performed during the preparation (or revision) of a Site-Specific Welding Emissions Management Plan, in accordance with §63.11516(f)(7)(iii), "Requirements for opacities exceeding 20 percent."

(12) *Site-Specific Welding Emissions Management Plan.* If you have been required to prepare a plan in accordance with §63.11516(f)(7)(iii), "Site-Specific Welding Emissions Management Plan," you must maintain a copy of your current Site-Specific Welding Emissions Management Plan in your records and it must be readily available for inspector review.

(13) *Manufacturer's instructions.* If you comply with this subpart by operating any equipment according to manufacturer's instruction, you must keep these instructions readily available for inspector review.

(14) Welding Rod usage. If you operate a new or existing welding affected source which is not required to comply with the requirements of §63.11516(f)(3) through (8) because it uses less than 2,000 pounds per year of welding rod (on a rolling 12-month basis), you must maintain records demonstrating your welding rod usage on a rolling 12-month basis.

(15) Your records must be maintained according to the requirements in paragraphs (c)(14)(i) through (iii) of this section.

(i) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1), "General Provisions." Where appropriate, the records may be maintained as electronic spreadsheets or as a database.

(ii) As specified in §63.10(b)(1), "General Provisions," you must keep each record for 5 years following the date of each occurrence, measurement, corrective action, report, or record.

(iii) You must keep each record on-site for at least 2 years after the date of each occurrence, measurement, corrective action, report, or record according to §63.10(b)(1), "General Provisions." You may keep the records off-site for the remaining 3 years.

The facility will be required to comply with the applicable notification, recordkeeping, and reporting requirements of the subpart.

§63.11521 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by EPA or a delegated authority such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency, in addition to EPA, has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency.

(c) The authorities that cannot be delegated to state, local, or tribal agencies are specified in paragraphs (c)(1) through (5) of this section.

(1) Approval of an alternative non-opacity emissions standard under §63.6(g), of the General Provisions of this part.

(2) Approval of an alternative opacity emissions standard under §63.6(h)(9), of the General Provisions of this part.

(3) Approval of a major change to test methods under §63.7(e)(2)(ii) and (f), of the General Provisions of this part. A "major change to test method" is defined in §63.90.

(4) Approval of a major change to monitoring under §63.8(f), of the General Provisions of this part. A "major change to monitoring" under is defined in §63.90.

(5) Approval of a major change to recordkeeping and reporting under §63.10(f), of the General Provisions of this part. A "major change to recordkeeping/reporting" is defined in §63.90.

Permit Conditions Review

This section describes the permit conditions for this initial permit.

PERMIT SCOPE

Initial Permit Condition 1.1 describes the processes at the facility that are being permitted under this action.

Table 1.1 describes all emission sources and any control equipment at the facility. Footnotes to Table 1 identify the terms of equivalency for any alternative equipment that is installed in lieu of the listed equipment.

STRUCTURAL STEEL WELDING, PLASMAC CUTTING, ABRASIVE BLASTING, NATURAL GAS PROCESS HEATING, CUTTING TORCHES, STEEL PARTS COATING, AND NATURAL GAS SPACE HEATING

Initial Permit Condition 2.1 details the process descriptions for the emissions units permitted in this section of the permit.

Initial Permit Condition 2.2 describes the equipment being permitted and the emissions control equipment (if applicable) being employed to control emissions from each unit.

Initial Permit Condition 2.3 lists the criteria pollutant emission limits for the emission units permitted in this section of the permit.

Initial Permit Condition 2.4 establishes that visible emissions shall not exceed 20% opacity as required by IDAPA 58.01.01.625.

Initial Permit Condition 2.5 establishes that odors shall not be generated as required by IDAPA 58.01.01.776.01.

Initial Permit Condition 2.6 establishes that the space heaters, process heaters, and cutting torches shall only combust natural gas as fuel.

Initial Permit Condition 2.7 establishes that welding wire usage shall not exceed 2,304,000 lb/year during any consecutive 12 month period.

Initial Permit Condition 2.8 establishes that all abrasive blasting shall be conducted within an enclosed vessel with the dust collection system installed and operating and all openings on the vessel closed.

Initial Permit Condition 2.9 establishes that the total usage of coatings in the steel parts coating process shall not exceed 60 gallons/day and 10,000 gallons/year.

Initial Permit Condition 2.10 establishes that all coatings applied in the steel parts coating process shall be applied using HVLP spray guns or equivalent technology with a minimum 65% transfer efficiency.

Initial Permit Condition 2.11 establishes dry abrasive blasting emissions management requirements as specified in 40 CFR 63 subpart XXXXXX.

Initial Permit Condition 2.12 establishes dry grinding and dry polishing emissions management requirements as specified in 40 CFR 63 subpart XXXXXX.

Initial Permit Condition 2.13 establishes welding emissions management requirements as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.14 establishes general notification requirements as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.15 establishes visible emissions monitoring notification requirements for welding operations as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.16 establishes recordkeeping requirements regarding quantity of materials purchased and safety data sheets for materials used in the welding and steel parts coating processes.

Initial Permit Condition 2.17 establishes recordkeeping requirements regarding the usage of welding wire.

Initial Permit Condition 2.18 establishes recordkeeping requirements regarding the usage of materials in the steel parts coating process.

Initial Permit Condition 2.19 establishes VOC emissions monitoring requirements for the steel parts coating process.

Initial Permit Condition 2.20 establishes recordkeeping requirements regarding any equipment that is installed as being equivalent to the specific make or model that is listed in Table 1.1 or Table 2.1.

Initial Permit Condition 2.21 establishes visible emissions monitoring general requirements as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.22 establishes visible emissions monitoring requirements for welding operations as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.23 establishes general recordkeeping requirements as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.24 establishes requirements for recordkeeping for welding operations as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.25 establishes the incorporation of federal requirements by reference.

Initial Permit Condition 2.26 requires the permittee to comply with the Monitoring and Recordkeeping General Provisions.

EMERGENCY ENGINES

Initial Permit Condition 3.1 details the process descriptions for the emissions units permitted in this section of the permit.

Initial Permit Condition 3.2 describes the equipment being permitted and the emissions control equipment (if applicable) being employed to control emissions from each unit.

Initial Permit Condition 3.3 lists the criteria pollutant emission limits for the emission units permitted in this section of the permit.

Initial Permit Condition 3.4 establishes that visible emissions shall not exceed 20% opacity as required by IDAPA 58.01.01.625.

Initial Permit Condition 3.5 establishes that only ULSD fuel may be used in the John Deere fire pump engine and that only propane may be used in the Generac engine.

Initial Permit Condition 3.6 specifies the sulfur content requirement of ULSD.

Initial Permit Condition 3.7 establishes that a non-resettable hour meter must be installed on each engine prior to startup.

Initial Permit Condition 3.8 – 3.14 establish the requirements of 40 CFR 60 Subpart IIII that are applicable to the John Deere engine.

Initial Permit Condition 3.15 – 3.18 establish the requirements of 40 CFR 60 Subpart JJJJ that are applicable to the Generac engine.

Initial Permit Condition 3.19 establishes recordkeeping requirements regarding the sulfur content of the emergency engine diesel fuel.

Initial Permit Condition 3.20 establishes the incorporation of federal requirements by reference.

GENERAL PROVISIONS

Initial Permit Condition 4.1

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.

Initial Permit Condition 4.2

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.

Initial Permit Condition 4.3

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.

Initial Permit Condition 4.4

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

Initial Permit Condition 4.5

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.

Initial Permit Condition 4.6

The notification of construction and operation provision requires that the permittee notify DEQ of the dates of construction and operation, in accordance with IDAPA 58.01.01.211.03.

Initial Permit Condition 4.7

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.

Initial Permit Condition 4.8

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.

Initial Permit Condition 4.9

The performance test report provision requires that the permittee report any performance test results to DEQ within 30 days of completion, in accordance with IDAPA 58.01.01.157.04-05.

Initial Permit Condition 4.10

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.

Initial Permit Condition 4.11

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.

Initial Permit Condition 4.12

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

Initial Permit Condition 4.13

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

Initial Permit Condition 4.14

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

Initial Permit Condition 4.15

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

Initial Permit Condition 4.16

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

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c or IDAPA 58.01.01.404.01.c. During this time, there **were no** comments on the application and 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

Controlled Criteria Pollutants PTE

Source	PM ₁₀		PM _{2.5}		CO		NO _x		SO _x		VOC		Lead	CO _{2e}
	(lb/hr)	(Ton/yr)	(lb/hr)	(Ton/yr)	(lb/hr)	(Ton/yr)	(lb/hr)	(Ton/yr)	(lb/hr)	(Ton/yr)	(lb/hr)	(Ton/yr)	(lb/month)	(Ton/yr)
NG Heaters ^a	5.80E-02	2.48E-01	5.80E-02	2.48E-01	6.41E-01	2.74E+00	7.64E-01	3.26E+00	4.58E-03	1.95E-02	4.20E-02	1.79E-01	2.72E-03	4,672
NG Process Heating and Cutting ^a	7.30E-03	2.66E-02	7.30E-03	2.66E-02	8.07E-02	2.94E-01	9.61E-02	3.50E-01	5.76E-04	2.10E-03	5.28E-03	1.93E-02	2.92E-04	419
Fire Pump Engine ^a	4.16E-02	2.08E-03	4.16E-02	2.08E-03	2.78E-01	1.39E-02	1.87E+00	9.37E-02	3.28E-03	1.64E-04	6.94E-02	3.47E-03	NA	17
Propane Emergency Generator ^a	9.66E-03	2.42E-03	9.66E-03	2.42E-03	4.12E+01	1.03E+01	1.06E+00	2.66E-01	2.93E-04	7.32E-05	1.47E-02	3.68E-03	NA	15
Welding	1.99E-02	8.70E-02	1.99E-02	8.70E-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Abrasive Blasting	2.64E-02	1.12E-02	2.64E-02	1.12E-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Plasmarc Cutting	1.12E-02	4.07E-02	1.12E-02	4.07E-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Painting	1.60	1.60	1.60	1.60	NA	NA	NA	NA	NA	NA	1.60	1.60	NA	NA
Total	1.7	2.1	1.7	2.1	42.2	13.3	3.8	4.0	0.009	0.02	1.7	1.8	0.003	5,122
10% SER	-	1.5	-	1.5	-	10	-	4	-	4	-	4	0.06	NA
Category 1 Exemption	No		No		Yes		Yes		Yes		Yes		Yes	NA
Level I Threshold ^b	0.22	NA	0.054	0.35	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Modeling Required	YES	NA	YES	YES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA = Not Applicable
NG = Natural Gas

^a These units have no additional controls

^b Source: State of Idaho Guideline for Performing Air Quality Impact Analysis, Table 2: Modeling Thresholds for Criteria Pollutants, July 2, 2011

Toxic Air Pollutants PTE

TAP Pollutants	CAS No.	PTE (lb/hr)	PTE (ton/yr)
1,1,2,2-Tetrachloroethane	79-34-5	1.26E-05	3.15E-06
1,3-Butadiene	106-99-0	4.11E-04	8.65E-05
1,3-Dichloropropene	542-75-6	6.32E-06	1.58E-05
Arsenic	7440-38-2	1.72E-06	7.22E-06
Benzene	71-43-2	2.74E-03	3.69E-04
Cadmium	7440-43-9	9.46E-06	3.97E-05
Formaldehyde	50-00-0	1.33E-02	5.38E-03
Nickel	7440-02-0	7.09E-05	2.69E-04
PAH except 7-PAH group	-	1.66E-04	9.53E-06
7-PAH	-	7.74E-05	1.83E-05

HAP Pollutants	PTE (T/yr)
1,1,2-Tetrachloroethane	3.15E-06
1,1,2-Trichloroethane	1.90E-06
1,3-Butadiene	8.65E-05
1,3-Dichloropropene	1.58E-06
Acetaldehyde	4.27E-04
Acrolein	3.37E-04
Arsenic	7.22E-06
Benzene	3.69E-04
Beryllium	4.33E-07
Cadmium	3.97E-05
Carbon Tetrachloride	2.20E-06
Chlorobenzene	1.61E-06
Chloroform	1.70E-06
Chromium	2.92E-04
Cobalt	3.03E-06
Ethylbenzene	3.09E-06
Ethylene Dibromide	2.65E-06
Formaldehyde	5.38E-03
Hexane	6.50E-02
Manganese (dust)	5.60E-03
Manganese (fume)	8.43E-03
Methanol	3.81E-04
Methylene Chloride	5.13E-06
Naphthalene	4.29E-05
Nickel	2.69E-04
Selenium	8.66E-07
Styrene	1.48E-06
Toluene	2.34E-04
Vinyl Chloride	8.93E-07
Xylene	5.38E-05
Total	8.69E-02

Non-Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Post-Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24 hour Average Emissions Rates for Units at the Facility (lb/hr)	Non- Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
1,2-Dichloropropane	6.47E-06	6.47E-06	0	23.133	N
Acrolein	1.50E-03	1.50E-03	0	0.017	N
Barium	1.37E-04	1.37E-04	0	0.033	N
Carbon black	4.16E-04	4.16E-04	0	0.23	N
Chlorobenzene	6.41E-06	6.41E-06	0	23.3	N
Chromium	7.81E-05	7.81E-05	0	0.033	N
Cobalt	7.22E-07	7.22E-07	0	0.0033	N
Copper (dust, mist)	6.61E-05	6.61E-05	0	0.067	N
Copper (fume)	7.31E-06	7.31E-06	0	0.011	N
Dichlorobenzene	1.03E-05	1.03E-05	0	20	N
Ethylbenzene	1.23E-05	1.23E-05	0	19	N
Hexane	1.55E-02	1.55E-02	0	12	N
Iron oxide fume	2.54E-02	2.54E-02	0	0.333	N
Iron salts, soluble as Fe	1.11E-02	1.11E-02	0	0.067	N
Manganese (dust)	1.34E-03	1.34E-03	0	0.333	N
Manganese (fume)	2.11E-03	2.11E-03	0	0.067	N
Methanol	1.52E-03	1.52E-03	0	17.3	N
Molybdenum	9.46E-06	9.46E-06	0	0.333	N
Naphthalene	2.29E-04	2.29E-04	0	3.33	N
Pentane	2.23E-02	2.23E-02	0	118	N
Selenium	2.06E-07	2.06E-07	0	0.013	N
Silicon	5.95E-04	5.95E-04	0	0.667	N
Styrene	5.92E-06	5.92E-06	0	6.67	N
Toluene	1.15E-03	1.15E-03	0	25	N
Vanadium	1.98E-05	1.98E-05	0	0.093	N
Xylene	6.87E-04	6.87E-04	0	29	N
Zinc	2.49E-04	2.49E-04	0	0.667	N

Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Post Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24 hour Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
1,1,2,2-Tetrachloroethane	1.26E-05	1.26E-05	0	1.16E-05	Y
1,1,2-Trichloroethane	7.62E-06	7.62E-06	0	4.20E-04	N
1,1-Dichloroethane	5.62E-06	5.62E-06	0	2.70E+01	N
1,2-Dichloroethane	5.62E-06	5.62E-06	0	2.67E+00	N
1,3-Butadiene	4.11E-04	4.11E-04	0	2.46E-05	Y
1,3-Dichloropropene	6.32E-06	6.32E-06	0	1.99E-07	Y
3-Methylchloranthene	1.55E-08	1.55E-08	0	2.50E-06	N
Acetaldehyde	2.98E-03	2.98E-03	0	3.00E-03	N
Arsenic	1.72E-06	1.72E-06	0	1.50E-06	Y
Benzene	2.74E-03	2.74E-03	0	8.00E-04	Y
Beryllium	1.03E-07	1.03E-07	0	2.80E-05	N
Cadmium	9.46E-06	9.46E-06	0	3.70E-06	Y
Carbon Tetrachloride	8.81E-06	8.81E-06	0	4.40E-04	N
Chloroform	6.82E-06	6.82E-06	0	2.80E-04	N
Ethylene Dibromide	1.06E-05	1.06E-05	0	3.00E-05	N
Formaldehyde	1.33E-02	1.33E-02	0	5.10E-04	Y
Methylene Chloride	2.05E-05	2.05E-05	0	1.60E-03	N
Nickel	7.09E-05	7.09E-05	0	2.70E-05	Y
PAH except 7-PAH group	1.66E-04	1.66E-04	0	9.10E-05	Y
7-PAH	7.74E-05	7.74E-05	0	2.00E-06	Y
Vinyl Chloride	3.57E-06	3.57E-06	0	9.40E-04	N

APPENDIX B – AMBIENT AIR QUALITY IMPACT ANALYSES

MEMORANDUM

DATE: September 15, 2015
TO: Randy Stegen, Permit Writer, Air Program
FROM: Thomas Swain, Air Quality Modeler, Analyst 3, Air Program
PROJECT: Gayle Manufacturing Company (GMC), Caldwell, Idaho Facility, Permit to Construct (PTC), Facility No. 027-00148
SUBJECT: Demonstration of Compliance with IDAPA 58.01.01.203.02 (NAAQS) and 203.03 (TAPs) as it relates to air quality impact analyses.

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1.0 Summary

Gayle Manufacturing Company (GMC) submitted an application for a Permit to Construct (PTC) for a facility near Caldwell, Idaho. This facility, designated as the GMC-A facility, will be a new steel production plant that fabricates structural steel members to be used in the construction of multi-story steel-framed buildings. GMC-A will be located at the southwest corner of Weitz Road and Highway 19.

The facility will receive steel from rail and trucks, and it will stage the product in the yard prior to fabrication. The raw steel will be processed using drilling machines, cutting machines, welding machines, bending machines, and shearing machines. Some painting of finished product will be done with a shop coat primer outside on a concrete slab. The entire process is discussed in detail in the main body of the DEQ Statement of Basis supporting the issued PTC. This modeling review memorandum provides a summary and approval of the ambient air impact analyses submitted with the permit application. It also describes DEQ's review of those analyses, DEQ's verification analyses, additional clarifications, and conclusions.

Project-specific air quality impact analyses involving atmospheric dispersion modeling of estimated emissions associated with the proposed facility modification were submitted to DEQ to demonstrate that the modification would not cause or significantly contribute to a violation of any ambient air quality standard as required by (IDAPA 58.01.01.203.02 and 203.03 {Idaho Air Rules Section 203.02 and 03}).

CH2MHill, on behalf of GMC, performed the ambient air impact analyses for this project, demonstrating compliance with applicable air quality standards. The DEQ review summarized by this memorandum addressed only the rules, policies, methods, and data pertaining to the air impact analyses used to demonstrate that the estimated emissions increases at the facility associated with the proposed project will not cause or significantly contribute to a violation of any applicable air quality standard. This review did not evaluate compliance with other rules or analyses that do not pertain to the air impact analyses. Evaluation of emissions estimates was the responsibility of the permit writer and is addressed in the main body of the Statement of Basis. Emissions estimates were not reviewed as part of the modeling review described in this modeling review memorandum.

A modeling protocol was submitted to DEQ for this project on March 20, 2015. DEQ issued conditional approval of the protocol on March 30, with some comments. Significantly included in these comments was a directive by DEQ for GMC to use the Level I modeling thresholds when determining applicability for modeling criteria pollutants. CH2MHill submitted a PTC application on May 14, 2015. DEQ responded with a letter of incompleteness on June 5, addressing various issues with the modeling analyses that centered on the uncertainty that NAAQS compliance would be demonstrated when various errors were corrected. These errors included: using annual emission rates for short term modeling for several sources, omitting plasmarc cutting emissions, and uncertainty about release parameters for several major sources. CH2MHill then retracted the May 14, 2015 PTC application. Based on an assessment of modeling comments and revisions to emissions, CH2MHill submitted a replacement PTC application on July 1, 2015. DEQ responded with comments on the modeling analyses on July 22, 2015. Included in these comments were corrections to the NO₂ emissions (omission of NO₂ emissions from process and heating), and clarification of emissions from two TAPs pollutants, 1,1,2, 2 Tetrachloroethane and 1, 3 Butadiene. DEQ also commented that the emissions from two other TAPS, Arsenic and 1,3 Dichloropropene, were noted to be exceeding the EL rates as listed in Idaho Air Rules Sections 585 and 586, but were not included in the TAP impact analysis. CH2MHill responded in kind with a revised analysis on July 31, 2015. Because the response did not allow adequate time for DEQ to assess the analyses before the completeness deadline, the application was again deemed to be incomplete. After further analyses, DEQ found that the emissions for 1,3 Dichloropropene were still not adequately assessed. However, because these emissions originate from the emergency generator and fire pump, and are therefore governed by NESHAP regulations, (*Stationary Engines subject to 40 CFR 60, Subparts IIII or JJJJ, and/or 40 CFR 63, Subpart ZZZZ*), they were not required to be included in the Toxic Air Pollutant (TAP) impact analyses per *Idaho Air Rules Section 210.20*.

DEQ sent an email to CH2MHill on August 6, 2015 describing these findings, and CH2MHill concurred with the letter's recommendations. DEQ deemed the application complete on August 17, 2015. DEQ subsequently found that the modeling analyses adequately showed compliance with NAAQS and TAPS increments.

The final submitted air quality impact analyses: 1) utilized appropriate methods and models; 2) was conducted using reasonably accurate or conservative model parameters and input data (review of emissions 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 predicted pollutant concentrations from emissions associated with the project as modeled were below Significant Impact Levels (SILs) or other applicable regulatory thresholds; or b) that predicted pollutant concentrations from emissions associated with the project as modeled, when appropriately combined with co-contributing sources and background concentrations, were below applicable National Ambient Air Quality Standards (NAAQS) at ambient air locations where and when the project has a significant impact; 5) showed that Toxic Air Pollutant (TAP) emissions increases associated with the project will not result in increased ambient air impacts exceeding allowable TAP increments.

Table 1 presents key assumptions and results to be considered in the development of the permit.

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

Table 1. KEY ASSUMPTIONS USED IN MODELING ANALYSES	
Criteria/Assumption/Result	Explanation/Consideration
<p>General Emissions Rates. Emissions rates used in the modeling analyses, as listed in this memorandum, must represent maximum potential emissions as given by design capacity or as limited by the issued permit for the specific pollutant and averaging period.</p>	<p>Compliance has not been demonstrated for emissions rates greater than those used in the modeling analyses.</p>
<p>Level I Modeling Thresholds for Criteria Pollutant Emissions. Maximum short-term and long-term emissions of PM_{2.5}, PM₁₀, and NO₂ associated with the proposed project are above Level I modeling applicability thresholds as found in State of Idaho Modeling Guidelines. Emissions of other criteria pollutants were below Level I Thresholds.</p> <p>Project-specific air impact analyses are not necessary for pollutants with project-wide emissions increases below Level I Thresholds.</p>	<p>Project-specific air impact analyses demonstrating compliance with NAAQS, as required by Idaho Air Rules Section 203.02, are required for pollutants having an emissions increase that is greater than Level I modeling applicability thresholds. These thresholds are set to assure that impacts are below significant impact levels (SILs). Compliance with NAAQS has not demonstrated for emissions that exceed the emission estimates presented in the application.</p>
<p>TAPS Emissions: Maximum emission rates (as presented in July 2015 application) of several TAPS per Idaho Air Rules Sections 585 and 586 exceeded Emissions Screening Level (EL) rates.</p>	<p>Air impact analyses demonstrating compliance with TAPS, as required by Idaho Air Rules Section 203.03, is required for pollutants having an emissions rate greater than ELs.</p>
<p>TAPS Emissions regulated by NSPS and NESHAPS:</p> <p>Emission rates (as presented in July 2015 application) deriving from sources such as the emergency generator and fire pump are governed by NSPS and NESHAP regulations.</p>	<p>Air impact analyses demonstrating compliance with TAPS, as required by Idaho Air Rules Section 203.03, is required for all sources not governed by NSPS and NESHAPS.</p>
<p>Painting Emissions:</p> <p>Emission rates for painting activities are limited to daytime working hours from March-September.</p>	<p>Compliance has not been demonstrated for emissions rates in periods excluded from those used in the modeling analyses.</p>

2.0 Background Information

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

2.1 Project Description

GMC-A proposes to fabricate structural steel to be used in the construction of multi-story steel framed buildings. The majority of the steel will arrive by rail, although some will also come from steel service centers by truck. The raw steel will be stored in the yard and moved to storage bays by forklift. The steel will be processed using drilling machines, cutting machines, welding machines, bending machines, and shearing machines. Some painting will occur outside in warm weather months on a concrete slab using a shop coat primer. Emission sources will include a variety of space and process heaters, abrasive blasting contained within an enclosed vessel with a dust collector, welding activities, plasmarc cutters, cutting torches, emergency generators, and painting activities. The emissions for the process activities will be controlled in large by a RoboVent filtration system with two large vents. There are also two smaller roof vents that emit emissions from a small set of sources such as space heaters and abrasive blasting. Table 4 summarizes the emissions apportionment as calculated and modeled by CH2MHill.

2.2 Proposed Location and Area Classification

GMC-A will be located at the southwest corner of Weitz Road and Highway 19 near Caldwell, Idaho. This area is designated as an attainment or unclassifiable area for sulfur dioxide (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), lead (Pb), ozone (O₃), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM₁₀), 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, but is noted as being an area of concern for PM_{2.5} and ozone.

2.3 Air Impact Analyses Required for All Permits to Construct

Criteria Pollutant and TAP Impact Analyses for a PTC are addressed in 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:

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

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 according to methods outlined in 40 CFR 51, Appendix W (Guideline on Air Quality Models). Appendix W requires that facilities be modeled using emissions and operations representative of design capacity or as limited by a federally enforceable permit condition.

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.

DEQ has developed modeling applicability thresholds that effectively assure that project-related emissions increases below stated values will result in ambient air impacts below the applicable SILs. The threshold levels and dispersion modeling analyses supporting those levels are presented in the *State of Idaho Guideline for Performing Air Quality Impact Analyses*¹ (*Idaho Air Modeling Guideline*). Use of a modeling threshold represents the use of conservative modeling, performed in support of the threshold, as a project SIL analysis. Project-specific modeling applicability for this project is addressed in Section 3.1.1 of this memorandum.

If modeled maximum pollutant impacts to ambient air from the emissions 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 facility-wide emissions, and emissions from any nearby co-contributing sources, 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 lists SILs and 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 a violation of the standard, the permit may not be issued if the proposed project has a significant contribution (exceeding the SIL) to the modeled violation. This evaluation is made specific to both time and space. As an example, consider a hypothetical case where the SIL analysis indicates the project (new source or modification) has overall impacts exceeding the SIL and the cumulative impact analysis indicates a violation to the NAAQS. If project-specific impacts are below the SIL at the specific receptors showing the violations during the time periods when modeled violations occurred, then the facility does not have a significant contribution to the specific violations.

1. **Table 2. APPLICABLE REGULATORY LIMITS**

Pollutant	Averaging Period	Significant Impact Levels ^a ($\mu\text{g}/\text{m}^3$) ^b	Regulatory Limit ^c ($\mu\text{g}/\text{m}^3$)	Modeled Design Value Used ^d
PM ₁₀ ^e	24-hour	5.0	150 ^f	Maximum 6 th highest ^g
PM _{2.5} ^h	24-hour	1.2	35 ⁱ	Mean of maximum 8 th highest ^l
	Annual	0.3	12 ^k	Mean of maximum 1 st highest ^l
Carbon monoxide (CO)	1-hour	2,000	40,000 ^m	Maximum 2 nd highest ⁿ
	8-hour	500	10,000 ^m	Maximum 2 nd highest ⁿ
Sulfur Dioxide (SO ₂)	1-hour	3 ppb ^o (7.8 $\mu\text{g}/\text{m}^3$)	75 ppb ^p (196 $\mu\text{g}/\text{m}^3$)	Mean of maximum 4 th highest ^q
	3-hour	25	1,300 ^m	Maximum 2 nd highest ⁿ
	24-hour	5	365 ^m	Maximum 2 nd highest ⁿ
	Annual	1.0	80 ^r	Maximum 1 st highest ⁿ
Nitrogen Dioxide (NO ₂)	1-hour	4 ppb (7.5 $\mu\text{g}/\text{m}^3$)	100 ppb ^s (188 $\mu\text{g}/\text{m}^3$)	Mean of maximum 8 th highest ^t
	Annual	1.0	100 ^r	Maximum 1 st highest ⁿ
Lead (Pb)	3-month ^u	NA	0.15 ^r	Maximum 1 st highest ⁿ
	Quarterly	NA	1.5 ^r	Maximum 1 st highest ⁿ
Ozone (O ₃)	8-hour	40 TPY VOC ^v	75 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 O₃.
 - w. Annual 4th highest daily maximum 8-hour concentration averaged over three years. The O₃ standard was revised (the notice was signed by the EPA Administrator on October 1, 2015) to 70 ppb. However, this standard will not be applicable for permitting purposes until it is incorporated by reference *sine die* into Idaho Air Rules.

Compliance with Idaho Air Rules Section 203.02 is generally demonstrated if: a) applicable specific criteria pollutant emissions increases are at a level defined as BRC (Below Regulatory Concern), using the criteria established by DEQ regulatory interpretation², 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 e) if the cumulative NAAQS analysis showed NAAQS violations, the impact of proposed facility/modification 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 Idaho Air Rules Section 210, if the total project-wide emissions 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 emissions increase must be estimated. If ambient impacts are less than applicable Acceptable Ambient Concentrations (AACs) for non-carcinogens of Idaho Air Rules Section 585 and Acceptable Ambient Concentrations for Carcinogens (AACCs) of Idaho Air Rules Section 586, then compliance with TAP requirements has been demonstrated.

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.

3.0 Analytical Methods and Data

This section describes the methods and data used in analyses to demonstrate compliance with applicable air quality impact requirements.

3.1 Emission Source Data

Emissions rates of criteria pollutants for the proposed project at the GMC-A facility were provided by CH2MHill for various applicable averaging periods. Review and approval of estimated emissions was the responsibility of the DEQ permit writer, and is not addressed in this modeling memorandum. DEQ modeling review included verification that the application's potential emissions rates were properly used in the model. The rates listed must represent the maximum allowable rate as averaged over the specified period.

Emissions rates used in the dispersion modeling analyses submitted by GMC should be reviewed by the DEQ permit writer and compared with those in the emissions inventory of the permit application. All modeled criteria air pollutant and TAP emissions rates should be equal to or greater than the facility's emissions calculated in other sections of the PTC application or requested permit allowable emission rates.

3.1.1 Criteria Pollutant Emissions Rates and Modeling Applicability

Facility-wide potential to emit (PTE) values for CO, SO₂ and Pb would qualify for a below regulatory concern (BRC) permit exemption as per Idaho Air Rules Section 221 if it were not for other criteria pollutants exceeding BRC thresholds of 10 percent of emissions defined as significant. DEQ's regulatory interpretation policy of exemption provisions of Idaho Air Rules 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." The interpretation policy also states that the exemption criteria of uncontrolled PTE not to exceed 100 ton/year (Idaho Air Rules Section 220.01.a.i) is not applicable when evaluating whether a NAAQS impact analyses 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.

Table 3 lists the criteria pollutants NAAQS compliance demonstration applicability assessment. An impact analysis must be performed for pollutant increases that would not qualify for an exclusion as BRC, and these include PM₁₀, PM_{2.5}, and NO₂. Project-specific modeling applicability thresholds are provided in the *Idaho Air Modeling Guideline*. Modeling applicability emissions thresholds published in the *Idaho Air Modeling Guideline* were based on assuring an ambient impact of less than established SIL for that specific pollutant and averaging period. GMC assessed project emissions with Level I modeling thresholds, and elected to show compliance with air quality modeling for those pollutants that have emissions exceeding the Level I modeling thresholds.

If project-specific total emissions rates are below Level I thresholds, project-specific air impact analyses are not necessary for permitting. Use of Level II modeling thresholds are conditional, requiring DEQ approval. Table 4 provides the emissions-based modeling applicability summary. GMC selected to do air quality modeling analyses for all pollutants having emissions greater than the Level I Modeling Threshold. These pollutants, as shown in Table 4, are PM₁₀, PM_{2.5}, and NO₂.

Criteria Pollutant	BRC Level (ton/year)	Applicable Facility Wide PTE Emissions (ton/year)	Air Impact Analyses Required?
PM ₁₀ ^a	1.5	>2.1	Yes
PM _{2.5} ^b	1.0	2.1	Yes
Carbon Monoxide (CO)	10.0	3.6	No
Sulfur Dioxide (SO ₂)	4.0	0.02	No
Nitrogen Oxides (NOx)	4.0	4.4	Yes
Lead (Pb)	0.06	0.003	No

^a Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.

^b Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers.

All short term periods were modeled with the maximum short term emission rates as listed in Table 5. Emissions from painting activities were limited to daytime working hours from March to September.

Pollutant	Averaging Period	Emissions	Level I Modeling Thresholds	Level II Modeling Thresholds	Modeling Required
PM _{2.5}	24-hour	1.8 lb/hr	0.054	Not Applicable	Yes
	Annual	2.1 ton/yr	0.35		Yes
PM ₁₀	24-hour	1.8 lb/hr	0.22		Yes
NO ₂	1-hour	4.0 lb/hr	0.2		Yes
	Annual	4.4 ton/yr	1.2		Yes

Table 5. Criteria Emissions as Modeled by Source

Source ID	Source Description	24-hour PM ₂₅ (lb/hr)	24-hour PM ₁₀ (lb/hr)	Annual PM ₂₅ (tpy)	1-Hour NO ₂ (lb/hr)	Annual NO ₂ (tpy)
F1	Office Furnace	8.20E-04	8.20E-04	0.002992	0.0108	0.0393
F2	Office Furnace	8.20E-04	8.20E-04	0.002992	0.0108	0.0393
F3	Office Furnace	8.20E-04	8.20E-04	0.002992	0.0108	0.0393
F4	Office Furnace	8.20E-04	8.20E-04	0.002992	0.0108	0.0393
F5	Office Furnace	8.20E-04	8.20E-04	0.002992	0.0108	0.0393
F6	Office Furnace	8.20E-04	8.20E-04	0.002992	0.0108	0.0393
F7	Office Furnace	8.20E-04	8.20E-04	0.002992	0.0108	0.0393
F8	Office Furnace	8.20E-04	8.20E-04	0.002992	0.0108	0.0393
FP	Fire Pump	0.0416	0.0416	0.0104	NA ^a	0.468
VENT1	Roof Vent 1	0.0309	0.0309	0.113	0.0588	0.215
EG1	Emergency Generator	0.00966	0.00966	0.002422	NA ^a	0.28
FAN1	ROBOVENT1	0.0416	0.0416	0.159	0.344	1.25
FAN2	ROBOVENT2	0.0416	0.0416	0.159	0.344	1.25
VENT2	Roof Vent 2	0.0119	0.0119	0.0435	0.157	0.572
PAINT1	Painting	1.58	1.58	1.58	NA	NA

Ozone (O₃) differs from other criteria pollutants in that it is not typically emitted directly into the atmosphere. O₃ is formed in the atmosphere through reactions of VOCs, NO_x, and sunlight. Atmospheric dispersion models used in stationary source air permitting analyses (see Section 3.3.3) cannot be used to estimate O₃ impacts resulting from VOC and NO_x emissions from an industrial facility. O₃ concentrations resulting from area-wide emissions are predicted by using more complex airshed models such as the Community Multi-Scale Air Quality (CMAQ) modeling system. Use of the CMAQ model is very resource intensive and DEQ asserts that performing a CMAQ analysis for a particular permit application is not typically a reasonable or necessary requirement for air quality permitting.

Addressing secondary formation of O₃ has been somewhat addressed in EPA regulation and policy. As stated in a letter from Gina McCarthy of EPA to Robert Ukeiley, acting on behalf of the Sierra Club (letter from Gina McCarthy, Assistant Administrator, United States Environmental Protection Agency, to Robert Ukeiley, January 4, 2012):

... footnote 1 to sections 51.166(I)(5)(I) of the EPA's regulations says the following: "No de minimis air quality level is provided for ozone. However, any net emission increase of 100 tons per year or more of volatile organic compounds or nitrogen oxides subject to PSD would be required to perform an ambient impact analysis, including the gathering of air quality data."

The EPA believes it unlikely a source emitting below these levels would contribute to such a violation of the 8-hour ozone NAAQS, but consultation with an EPA Regional Office should still be conducted in accordance with section 5.2.1.c. of Appendix W when reviewing an application for sources with emissions of these ozone precursors below 100 TPY."

Allowable emissions estimates of VOCs and NO_x are below the 100 tons/year threshold, and DEQ determined it was not appropriate or necessary to require a quantitative source specific O₃ impact analysis.

Secondary Particulate Formation

The impact from secondary particulate formation resulting from emissions of NO_x, SO₂, and/or VOCs was assumed by DEQ to be negligible on the basis of the magnitude of emissions and the short distance from emissions sources to modeled receptors where maximum PM₁₀ and PM_{2.5} impacts would be anticipated.

3.1.2 Toxic Air Pollutant Emissions Rates

TAP emissions regulations under Idaho Air Rules Section 220 are only applicable for new or modified sources constructed after July 1, 1995. The submitted emission inventory spreadsheet accompanying the July 2015 application identified 10 TAP emissions that exceeded ELs and needed to be modeled. The TAPS 1,3 Dichloropropene, emitted from the emergency generator and the fire pump, was not modeled because these emission are regulated under 40 CFR 60,61, or 63. Sources regulated under 40 CFR 60,61, or 63 are exempt from TAP rules per Idaho Rules Section 210, and can be excluded from the TAP modeling applicability calculation. Table 6 provided the TAP applicability summary and Table 7 lists the emissions that were used in the impact modeling analyses.

Pollutant	CAS No.	Total Emissions Increase (lbs/hr)	EL (lbs/hr)
1,1,2,2-Tetrachloroethane	79-34-5	1.26E-05	1.10E-05
1,3-Butadiene	106-99-0	4.11E-04	2.4E-05
1,3 Dichloropropene ^a	542-75-6	6.32E-06	1.9E-07
Arsenic	7440-38-2	1.98E-06	1.50E-06
Benzene	71-43-2	2.74E-03	8.0E-04
Cadmium	7440-43-9	1.09E-05	3.70E-06
Formaldehyde	50-00-0	1.34E-02	5.10E-04
Nickel	7440-02-0	7.36E-05	2.7E-05
PAH	PAH	1.66E-04	2.0E-06
7-PAH	--	7.74E-05	2.0E-06

^a — This pollutant was not modeled because all emissions were from the emergency generator and fire pump, which are already governed by NSPS regulations

Table 7. TAPS Emission Rates per Source

Source ID	112T ^a (lb/hr)	13BUT ^b (lb/hr)	ARSENIC (lb/hr)	BENZENE (lb/hr)	CADMIUM (lb/hr)	FORMALD ^c (lb/hr)	NICKEL (lb/hr)	PAH ^d (lb/hr)	7PAH ^e (lb/hr)
F1			1.80E-08	1.89E-07	9.89E-08	6.74E-06	1.89E-07	3.15E-09	1.02E-09
F2			1.80E-08	1.89E-07	9.89E-08	6.74E-06	1.89E-07	3.15E-09	1.02E-09
F3			1.80E-08	1.89E-07	9.89E-08	6.74E-06	1.89E-07	3.15E-09	1.02E-09
F4			1.80E-08	1.89E-07	9.89E-08	6.74E-06	1.89E-07	3.15E-09	1.02E-09
F5			1.80E-08	1.89E-07	9.89E-08	6.74E-06	1.89E-07	3.15E-09	1.02E-09
F6			1.80E-08	1.89E-07	9.89E-08	6.74E-06	1.89E-07	3.15E-09	1.02E-09
F7			1.80E-08	1.89E-07	9.89E-08	6.74E-06	1.89E-07	3.15E-09	1.02E-09
F8			1.80E-08	1.89E-07	9.89E-08	6.74E-06	1.89E-07	3.15E-09	1.02E-09
FP		4.61E-04		1.10E-04		1.39E-04		9.43E-06	4.06E-07
VENT1			9.79E-08	1.03E-06	5.39E-07	3.68E-05	4.50E-05	1.71E-08	5.59E-09
EG1	7.19E-05	0.001884		4.50E-05		5.82E-04			4.00E-06
FAN1			5.73E-07	6.00E-06	3.15E-06	2.15E-04	6.00E-06	1.00E-07	3.26E-08
FAN2			5.73E-07	6.00E-06	3.15E-06	2.15E-04	6.00E-06	1.00E-07	3.26E-08
VENT2			2.60E-07	2.74E-06	1.44E-06	9.79E-05	2.74E-06	4.57E-08	1.49E-08

^a 1,1,2,2-Tetrachloroethane

^b 1,3-Butadiene

^c Formaldehyde

^d Polyaromatic Hydrocarbons, except 7-PAH group

^e Polyaromatic Hydrocarbons, 7-PAH group

3.1.3 Emissions Release Parameters

Table 5 provides emissions release parameters, including stack height, stack diameter, exhaust temperature, and exhaust velocity for point sources as used in the final modeling assessment. A volume source is used to assess the painting activities, and is also listed in Table 8.

Stack parameters used in the modeling analyses were not documented/justified in the originally submitted application, as the parameters of the ROBOVENT sources were inconsistent. CH2MHill subsequently provided (on July 1, 2015) adequate information on the derivation of stack parameters of these sources.

Table 8. Source Parameters used in Modeling

Source ID	Source Description	Easting (X) (m)	Northing (Y) (m)	Base Elevation (ft)	Stack Height (ft)	Temperature (°F)	Exit Velocity (fps)	Stack Diameter (ft)
F1	Office Furnace	519064.9	4835150.9	2324.3	19.30	-459.67	16.00	0.25
F2	Office Furnace	519071.1	4835151.0	2324.3	19.30	-459.67	16.00	0.25
F3	Office Furnace	519077.0	4835151.0	2324.3	19.30	-459.67	16.00	0.25
F4	Office Furnace	519082.2	4835150.9	2324.3	19.30	-459.67	16.00	0.25
F5	Office Furnace	519064.9	4835147.3	2324.3	19.30	-459.67	16.00	0.25
F6	Office Furnace	519071.1	4835147.4	2324.3	19.30	-459.67	16.00	0.25
F7	Office Furnace	519077.0	4835147.4	2324.3	19.30	-459.67	16.00	0.25
F8	Office Furnace	519082.2	4835147.2	2324.3	19.30	-459.67	16.00	0.25
FP	Fire Pump	519011.8	4835121.3	2325.8	11.00	961.00	0.00	0.50
VENT1 ^a	Roof Vent 1	518944.2	4835114.9	2326.3	36.50	-459.67	0.80	2.82
EG1	Emergency Generator	519011.8	4835122.2	2325.8	12.00	1076.00	25.46	0.50
FAN1 ^b	ROBOVENT 1	518860.8	4835054.0	2326.6	37.00	-459.67	47.40	3.67
FAN2 ^c	ROBOVENT 2	519012.4	4835054.0	2326.6	37.00	-459.67	47.40	3.67
VENT2 ^d	Roof Vent 2	518982.3	4834985.5	2327.9	40.70	-459.67	0.80	2.82
Volume Source		Easting (X) (m)	Northing (Y) (m)	Base Elevation (ft)	Release Height (ft)	Initial Dispersion Coeff.		
						Horiz(ft)	Vert (ft)	
PAINT1	Painting	518827.0	4835038.7	2328.2	2.50	3.49	2.33	

^a – Emissions from 10 space heaters and shot blast emissions

^b – Emissions from ½ welding, 1/2 B3 cutters, 1/2 B3 heaters, ½ B51 H-heaters, 1/2 torches, ½ B6 cutters, ½ heaters B52, heaters B53

^c – Emissions from ½ welding, 1/2 B3 cutters, 1/2 B3 heaters, ½ B51 H-heaters, 1/2 torches, ½ B6 cutters, ½ heaters B52, heaters B54

^d – Emissions from all heaters B7

3.2 Background Concentrations

Background concentrations were provided by DEQ and obtained from the Northwest International Air Quality Environmental Science and Technology Consortium (NW AIRQUEST) *Lookup 2009-2011 Design Values of Criteria Pollutants*³. These design value air pollutant levels are based on regional scale air pollution modeling of Washington, Oregon, and Idaho, with values influenced by monitoring data as a function of distance from the monitor. DEQ has determined that the NW AIRQUEST background values are representative of the Caldwell, Idaho area.

Because the modeling analyses showed maximum impacts for several criteria pollutants (PM₁₀, PM_{2.5}, and NO₂) to be greater than the Significant Impact Level (SIL) for each modeled pollutant and averaging period, background concentrations were needed for final NAAQS compliance demonstration, and are listed in Table 9.

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 Analyses

GMC performed project-specific air impact analyses that were determined by DEQ to be reasonably representative of the proposed facility as described in the application. Results of the submitted 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.

3.3.2 Modeling protocol and Methodology

GMC submitted a modeling protocol to DEQ for this project on March 20, 2015. DEQ conditionally approved the protocol shortly after, on March 30, with comments. CH2MHill submitted a PTC application on May 14, 2015. As discussed in Section 1 of this memorandum, CH2MHill then retracted that application, and resubmitted a new permit application on July 1, 2015. DEQ responded with a letter of incompleteness, and, as again discussed in section 1, CH2MHill and DEQ eventually came to an agreement on all modeling issues on August 6, 2015. The application was deemed complete on August 17, 2015.

The final analyses were generally conducted using data and methods discussed in post-application correspondence and in the *Idaho Air Quality Modeling Guideline*¹.

Parameter	Description/Values	Documentation/Addition Description
General Facility Location	Caldwell, ID	The facility is located in an area that is attainment or unclassified for all criteria air pollutants
Model	AERMOD	AERMOD with the PRIME downwash algorithm.
Meteorological Data	Boise surface data and Boise upper air data	Provided by DEQ 2008-2012.
Terrain	Considered	See section 3.3.5 below
Building Downwash	Considered	BPIP-PRIME was used to evaluate building dimensions for consideration of downwash effects in AERMOD.
Receptor Grid	Significant Impact Analyses	
	Grid 1	25-meter spacing along the ambient air boundary
	Grid 2	100-meter spacing for at least 1000 meters from the grid centered on the facility
	Grid 3	500-meter spacing for 5,000 meters from the grid centered on the facility

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 40 CFR 51, Appendix W (Guideline on Air Quality Models). The refined, steady state, multiple source Gaussian dispersion model AERMOD was promulgated as the replacement model for ISCST3 in December 2005. AERMOD retains the single straight line trajectory of ISCST3, but includes more advanced algorithms to assess turbulent mixing processes in the planetary boundary layer for both convective and stable stratified layers.

AERMOD version 14134 was used by GMC for the modeling analyses to evaluate impacts of the facility. This version was the current version at the time the application was received by DEQ.

3.3.4 Meteorological Data

DEQ provided five years of data from the Boise, Idaho airport for the years 2008-2012. This data included both surface and upper air data, and DEQ determined that these data are adequately representative of the meteorology in the Caldwell area for minor source permitting.

3.3.5 Effects of Terrain on Modeled Impacts

Terrain data were extracted from United States Geological Survey (USGS) National Elevation Dataset (NED) files in the WGS84 datum (approximately equal to the NAD83 datum). CH2MHill used 1 second data files (about 30-meter resolution), which is sufficient to adequately resolve terrain in the area for evaluating air pollution impacts resulting from emissions.

The terrain preprocessor AERMAP Version 11103 was used 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 emissions plume has sufficient energy to travel up and over the terrain or if the plume will travel around the terrain.

DEQ reviewed the area surrounding the facility by using the web-based mapping program Google Earth, which uses the WGS84 datum. DEQ also overlaid modeling files with a digital photograph background images acquired from the 2013 ARCGIS NAIP (National Agriculture Imagery Program) data base. The immediate area is effectively flat with regard to dispersion modeling affects. Elevations in the modeling domain matched those indicated by the background images

3.3.6 Facility Layout

DEQ verified proper identification of the ambient air boundary by comparing a graphical representation of the modeling input file to aerial photographs on Google Earth. The modeled layout matched well with aerial photographs in Google Earth as well as from those in the ARCGIS 2013 NAIP database. Placement of buildings could not be verified because the facility has not yet been constructed.

3.3.7 *Effects of Building Downwash on Modeled Impacts*

Potential downwash effects on emissions plumes were accounted for in the model by using building dimensions and locations (locations of building corners, base elevation, and building heights). Dimensions and orientation of proposed buildings were used as input to the Building Profile Input Program for the Plume Rise Model Enhancements downwash algorithm (BPIP-PRIME) to calculate direction-specific dimensions and Good Engineering Practice (GEP) stack height information for input to AERMOD.

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.” GMC will have a fence-line which clearly precludes public access to the facility and defines the ambient boundary for the facility.

3.3.9 Receptor Network

Table 9 describes the receptor grid used in the submitted analyses. The receptor grid met the minimum recommendations specified in the *Idaho Air Quality Modeling Guideline*¹. DEQ determined this grid assured maximum impacts were reasonably resolved by the model considering: 1) types of sources modeled; 2) modeled impacts, and the modeled concentration gradient; 3) conservatism of the methods and data used as inputs to the analyses; 4) potential for continual exposures or exposure to sensitive receptors.

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:

$$H = S + 1.5L, \text{ where:}$$

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 point sources were below GEP stack height. Therefore, consideration of downwash caused by nearby buildings was required.

4.0 Impact Modeling Analyses Results

4.1 Results for NAAQS Significant Impact Level and Cumulative Impact Analyses

All criteria pollutant emission increases associated with the proposed project above the Level I Modeling Applicability Thresholds were modeled to show compliance with the NAAQS. This included net project emissions of PM_{2.5}, PM₁₀, and NO₂. These modeling applicability thresholds, based on modeling of a single emissions stack with specified release parameters, were established to assure that impacts of projects when emissions equal to or less than these levels will not cause impacts exceeding the SILs. Since the emission increases associated with the proposed project are above these threshold values, a project-specific air impact analysis is required to demonstrate NAAQS compliance for issuance of the PTC. All impacts were above the SIL for each modeled pollutant, as listed in Table 10. Results of the cumulative NAAQS modeling impact analyses are listed in Table 11, and show that compliance has been demonstrated with the NAAQS for all modeled pollutants.

Table 10. RESULTS FOR SIGNIFICANT IMPACT ANALYSES

Pollutant	Averaging Period	Modeled Design Concentration (µg/m ³) ^a	Significant Impact Level (µg/m ³)	% of SIL	NAAQS (µg/m ³)
PM _{2.5} ^b	24-hour	56.1	1.2	4675	35
	Annual	0.9	0.3	300	12
PM ₁₀ ^c	24-hour	63.0	5	1260	150
NO ₂	1-hour	135.4	7.5	1805	188
	Annual	8.9	1	890	100

^a Highest max any year
^b Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers.
^c Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.

Table 11. RESULTS FOR NAAQS ANALYSES

Pollutant	Averaging Period	Modeled Design Concentration ($\mu\text{g}/\text{m}^3$)	Background Concentration ($\mu\text{g}/\text{m}^3$)	Total Concentration ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)
PM _{2.5}	24-hour	5.96 ^a	26.0	31.96	35
	Annual	0.9 ^b	10	10.9	12
PM ₁₀ ^c	24-hour	55	79	134	150
NO ₂	1-hour	84.1 ^d	77	161.1	188
	Annual	8.9	10.7	19.6	100

^a Mean of the Maximum eighth-highest value over a five year period.
^b Maximum annual average over a five year period.
^c Maximum 6th highest over a five year period
^d Mean of the eighth-highest daily 1-hour maximum over a five year period

4.2 Results for TAPs Impact Analyses

Dispersion modeling is required to demonstrate compliance with TAP increments specified by Idaho Air Rules Section 585 and 586 for those TAPs with project-specific emission increases exceeding emissions screening levels (ELs). The application identified nine TAPs that required air impact modeling analysis because emissions exceed ELs. Therefore, a modeling assessment was done to demonstrate compliance with the TAPS AAC or AACC. Results for arsenic were inadvertently omitted from the submitted 7/30/15 application, but are listed below.

Table 12. TAP MODELING RESULTS

Pollutant	CAS No.	Average	Modeled Conc. ($\mu\text{g}/\text{m}^3$)	AAC/AAAC ($\mu\text{g}/\text{m}^3$)	%AAC/AAAC
1,1,2,2-Tetrachloroethane	79-34-5	Annual	8.90E-06	1.70E-02	< 1%
1,3-Butadiene	106-99-0	Annual	3.93E-04	3.60E-03	11%
Arsenic	7440-38-2	Annual	2.0E-05	2.3E-04	9%
Benzene	71-43-2	Annual	4.14E-03	1.20E-01	3%
Cadmium	7440-43-9	Annual	9.00E-05	5.6E-04	16%
Formaldehyde	50-00-0	Annual	1.37E-02	7.7E-02	18%
Nickel	7440-02-0	Annual	9.20E-04	4.2E-03	22%
PAH	PAH	Annual	3.00E-04	1.4E-02	2%
7-PAH	—	Annual	7.00E-05	3.00E-04	23%

5.0 Conclusions

The ambient air impact analyses and other air quality analyses submitted with the GMC application demonstrated to DEQ's satisfaction that emissions from the proposed GMC project will not cause or significantly contribute to a violation of any ambient air quality standard.

References:

State of Idaho Guideline for Performing Air Quality Impact Analyses. Idaho Department of Environmental Quality. September 2013. State of Idaho DEQ Air Doc. ID AQ-011. Available at <http://www.deq.idaho.gov/media/1029/modeling-guideline.pdf>.

APPENDIX C – FACILITY DRAFT COMMENTS

The following comments were received from the facility on November 3, 2015:

Facility Comment: Since this is a new facility, some of the manufacturer names may possibly change with understanding that there are no emission increases above what has been provided. The facility requests the inclusion of the clause “or equivalent” to the manufacturer names specified in Table 1.1, Table 2.1, and Table 3.1 of the permit.

DEQ Response: DEQ has revised Table 1.1 (except for the two listed engines) and Table 2.1 of the permit to include the clause “or equivalent” and has developed footnotes to Table 1.1 and Table 2.1 to specify what the terms of equivalency are for each type of device. DEQ has also added an additional permit condition (2.20) to establish recordkeeping requirements that the facility shall comply with regarding any alternative equipment that is installed as equivalent to the equipment that is specified in Table 1.1 or Table 2.1.

DEQ has not added the clause “or equivalent” to the engines listed in Table 1.1 and Table 3.1 because of the difficulty in determining what is truly “equivalent” in regards to engines that are subject to NSPS, MACT, NESHAP, and NOx modeling requirements.

Facility Comment: Please provide the 40 CFR 63 Subpart XXXXXX Initial Notification due date for a new facility.

DEQ Response: DEQ has added the requested information to permit condition 2.14. The initial notification for a new facility is due no later than 120 days after the initial startup.

APPENDIX D – PROCESSING FEE

PTC Fee Calculation

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: Gayle Manufacturing Company
Address: P.O. Box 1365
City: Woodland
State: CA
Zip Code: 95776
Facility Contact: James DeBlasio
Title: CFO
AIRS No.: 027-00148

- 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	4.4	0	4.4
SO ₂	0.0	0	0.0
CO	3.6	0	3.6
PM10	2.1	0	2.1
VOC	1.8	0	1.8
TAPSHAPS	0.1	0	0.1
Total:	0.0	0	12.0
Fee Due	\$ 5,000.00		

Comments: