

Statement of Basis

**Permit to Construct No. P-2017.0030
Project ID 61892**

**Gayle Manufacturing Company - Nampa
Nampa, Idaho**

Facility ID 027-00158

Final

August 31, 2017
Kelli Wetzel *KW*
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.

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE 3

FACILITY INFORMATION 5

 Description 5

 Permitting History 5

 Application Scope 5

 Application Chronology 5

TECHNICAL ANALYSIS 6

 Emissions Units and Control Equipment 6

 Emissions Inventories 6

 Ambient Air Quality Impact Analyses 10

REGULATORY ANALYSIS..... 11

 Attainment Designation (40 CFR 81.313)..... 11

 Facility Classification 11

 Permit to Construct (IDAPA 58.01.01.201) 12

 Tier II Operating Permit (IDAPA 58.01.01.401) 12

 Visible Emissions (IDAPA 58.01.01.625) 12

 Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70) 12

 PSD Classification (40 CFR 52.21)..... 12

 NSPS Applicability (40 CFR 60) 13

 NESHAP Applicability (40 CFR 61) 13

 MACT Applicability (40 CFR 63) 13

 Permit Conditions Review..... 28

PUBLIC REVIEW 30

 Public Comment Opportunity..... 30

APPENDIX A – EMISSIONS INVENTORIES 31

APPENDIX B – AMBIENT AIR QUALITY IMPACT ANALYSES 32

APPENDIX C – FACILITY DRAFT COMMENTS 33

APPENDIX D – PROCESSING FEE 35

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
Btu	British thermal units
CAA	Clean Air Act
CAS No.	Chemical Abstracts Service registry number
cfm	cubic feet per minute
CFR	Code of Federal Regulations
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
gph	gallons per hour
gpm	gallons per minute
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hr/yr	hours per consecutive 12 calendar month period
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometers
lb/hr	pounds per hour
lb/qtr	pound per quarter
m	meters
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
MMBtu	million British thermal units
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
O&M	operation and maintenance
O ₂	oxygen
PAH	polyaromatic hydrocarbons
PC	permit condition
PM	particulate matter
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
ppm	parts per million
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
PTC	permit to construct
PTC/T2	permit to construct and Tier II operating permit

PTE	potential to emit
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
scf	standard cubic feet
SCL	significant contribution limits
SIP	State Implementation Plan
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO ₂	sulfur dioxide
SO _x	sulfur oxides
T/day	tons per calendar day
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar month period
T2	Tier II operating permit
TAP	toxic air pollutants
ULSD	ultra-low sulfur diesel
U.S.C.	United States Code
VOC	volatile organic compounds
yd ³	cubic yards
µg/m ³	micrograms per cubic meter

FACILITY INFORMATION

Description

Gayle Manufacturing Company operates an existing structural steel fabrication plant located in Nampa. The fabrication process includes the following steps:

- Raw steel is received from steel mills and staged in the yard prior to fabrication.
- Raw steel is moved to the material storage crane bay via forklift.
- Raw steel is processed by drilling, cutting, welding, bending, and shearing machines.
- A small percentage of finished structural steel products are painted with a shop coat primer in a three-sided structure.

The facility consists of four types of air emission sources:

- Furnace heaters and space heaters burn natural gas to provide heat to the administration office and Shop #1; respectively.
- Welding is performed inside Shop #1 using welding wire or welding rod. Particulate matter emissions are controlled by a Robovent filtration system to control and reduce emissions within the welding area.
- Plasmarc cutters are fitted with self-contained dust collectors for particulate matter collection.
- Structural steel coating is periodically performed inside Shop #2 using an airless sprayer. Shop #2 is a 3-sided structure.

Permitting History

This is the initial PTC for an existing facility that was constructed in 1998 thus there is no permitting history.

Application Scope

This permit is the initial PTC for this facility. The applicant has proposed to operate a structural steel fabrication plant in Nampa, Idaho.

Application Chronology

April 27, 2017	DEQ sent a notice of violation to the facility, which included notification that a PTC was required (Enforcement Case No. E-2017.0002).
May 24, 2017	DEQ received an application and an application fee.
May 30 – June 14, 2017	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
June 14, 2017	DEQ received supplemental information from the applicant.
June 23, 2017	DEQ determined that the application was complete.
July 28, 2017	DEQ made available the draft permit and statement of basis for peer and regional office review.
August 8, 2017	DEQ made available the draft permit and statement of basis for applicant review.
August 24, 2017	DEQ received the permit processing fee.
August 31, 2017	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION

Sources	Control Equipment
<u>Structural Steel Welding:</u> Max. production: 95,000 lb/yr of welding wire 1,000 lb/yr of welding rod	<u>Filtration Unit:</u> Manufacturer: Robovent Model: Endurex A13 Control efficiency: 99.5% at 0.5 micron
<u>Plasmarc Cutters (1 Plateline and 1 Slicer):</u> Manufacturer: Hypertherm Model: HT2000	<u>2 Baghouses:</u> Manufacturer: Donaldson Torit Model: DF T2-8 and TD-486 Number of bags: 8 and 12, respectively Control efficiency: 99.99% at 0.5 micron
<u>Steel Parts Coating Operations:</u> Paints: Steel Spec Weld-Thru Primer 2.3 Red Oxide or Steel Spec Structural Steel Primer, Gray	Graco Airless Spray Guns with a transfer efficiency of 60%
<u>Natural Gas Space Heating in Shop #1 (10 units):</u> Type: Gas-fired infrared Manufacturer: RE-VERBER-RAY Model: HL 50-200 N Rating: 200,000 Btu/Hr	None
<u>Natural Gas Space Heating in Office (2 units):</u> Type: Natural gas-fired Manufacturer: Lennox Model: G27M5-120 Rating: 120,000 Btu/Hr	None
<u>Natural Gas Space Heating in Office (2 units):</u> Type: Natural gas-fired Manufacturer: Trane Model: XR90 Rating: 93,000 Btu/Hr	None

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 space heaters, plasmarc cutters, painting and welding operations at the facility (see Appendix A) associated with this proposed project. Emissions estimates of criteria pollutant, GHG, and HAPs were based on emission factors from AP-42, equipment vendors, operation of 8,760 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 8,760 hr/yr.

Table 2 UNCONTROLLED POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC	CO _{2e}
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Point Sources						
Natural Gas Heaters	0.079	0.006	0.98	0.42	0.057	1,244.18
Welding	1.59	0.00	0.00	0.00	0.00	0.00
Plasmarc Cutting	43.11	0.00	0.00	0.00	0.00	0.00
Painting	0.59	0.00	0.00	0.00	3.46	0.00
Total, Point Sources	45.37	0.006	0.98	0.42	3.52	1,244.18

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 8,760 hr/yr. Then, the worst-case maximum HAP Potential to Emit was determined for this project.

Table 3 UNCONTROLLED POTENTIAL TO EMIT FOR HAZARDOUS AIR POLLUTANTS

Hazardous Air Pollutants	PTE (T/yr)
Arsenic	2.08E-06
Benzene	2.19E-05
Beryllium	1.25E-07
Cadmium	1.15E-05
Chromium	1.46E-05
Cobalt	8.75E-07
Formaldehyde	7.81E-04
Hexane	1.88E-02
Manganese Dust	3.98E-04
Manganese Fume	4.32E-03
Naphthalene	6.35E-06
Nickel	2.19E-05
Selenium	2.50E-07
Toluene	3.54E-05
Total	0.02

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 an existing facility. However, since this is the first time the facility is receiving a permit, 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 95,000 lb/yr of welding wire and 1,000 lb/yr of welding rod (as proposed by the applicant) and AP-42 Section 12.19. Particulate matter emissions are controlled by fabrication exhaust fan filters with a control efficiency of 99.5%.
- Plasmarc cutter emissions were based on AP-42 Section 12 and a vendor guarantee of 99.99% control efficiency for the control equipment.
- Painting emissions were based on VOC and solids content of the paint and a maximum usage of 20 gallons/day of Steel Spec Weld-Thru Primer 2.3 Red Oxide or 30 gallons/day of Steel Spec Structural Steel Primer, Gray. Combined annual throughput is 2,500 gallons/year. Transfer efficiency is 60% for PM emissions.
- Natural gas heater emissions were based on AP-42 Section 1.4 and operating all of the heaters at maximum capacity for 8,760 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 _{2e}
	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)	T/yr ^(b)
Natural Gas Heaters	0.018	0.079	0.001	0.006	0.22	0.98	0.095	0.42	0.013	0.057	1,244.18
Welding	0.07	0.008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Plasmarc Cutting	0.02	0.043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Painting	0.39	0.59	0.00	0.00	0.00	0.00	0.00	0.00	3.46	3.46	0.00
Post Project Totals	0.50	0.72	0.00	0.01	0.22	0.98	0.10	0.42	3.47	3.52	1,244

- 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 _{2e}
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	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
Post Project Potential to Emit	0.50	0.72	0.00	0.01	0.22	0.98	0.10	0.42	3.47	3.52	1,244
Changes in Potential to Emit	0.50	0.72	0.00	0.01	0.22	0.98	0.10	0.42	3.47	3.52	1,244

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.

Pre- and post-project, as well as the change in, non-carcinogenic TAP emissions are presented in the following table:

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

Non-Carcinogenic Toxic Air Pollutants	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)
Acetone	0.00E-03	2.60E+00	2.60E+00	119	No
Barium	0.00E-03	8.17E-05	8.17E-05	0.033	No
Carbon black	0.00E-03	1.40E-02	1.40E-02	0.23	No
Chromium	0.00E-03	3.33E-06	3.33E-06	0.033	No
Cobalt	0.00E-03	2.00E-07	2.00E-07	0.0033	No
Copper fume	0.00E-03	2.76E-04	2.76E-04	0.013	No
Crystalline Silica	0.00E-03	1.47E-02	1.47E-02	0.0067	Yes
Dichlorobenzene	0.00E-03	2.85E-06	2.85E-06	20	No
Fluorides (as F)	0.00E-03	4.09E-03	4.09E-03	0.167	No
Hexane (n-Hexane)	0.00E-03	4.28E-03	4.28E-03	12	No
Iron oxide	0.00E-03	3.02E-04	3.02E-04	0.333	No
Iron salts	0.00E-03	1.58E-02	1.58E-02	0.067	No
Magnesium Oxide	0.00E-03	3.02E-04	3.02E-04	0.667	No
Manganese dust	0.00E-03	3.35E-03	3.35E-03	0.333	No
Manganese fume	0.00E-03	1.96E-03	1.96E-03	0.067	No
Molybdenum	0.00E-03	2.62E-06	2.62E-06	0.333	No
Naphthalene	0.00E-03	1.45E-06	1.45E-06	3.33	No
Pentane	0.00E-03	6.18E-03	6.18E-03	118	No
Selenium	0.00E-03	5.71E-08	5.71E-08	0.013	No
Silicon	0.00E-03	4.53E-04	4.53E-04	0.667	No
Toluene	0.00E-03	8.09E-06	8.09E-06	25	No
Vanadium	0.00E-03	5.47E-06	5.47E-06	0.003	No
Zinc	0.00E-03	6.90E-05	6.90E-05	0.667	No
Zinc Oxide	0.00E-03	4.67E-01	4.67E-01	0.667	No

One of the PTEs for non-carcinogenic TAP was exceeded as a result of this project. Therefore, modeling is required for crystalline silica because 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 toxic air pollutants (TAP) is provided in the following table.

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

Carcinogenic Toxic Air Pollutants	Pre-Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Post Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Change in Annual Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
3-Methylchloranthene	0.00E-03	4.28E-09	4.28E-09	2.5E-06	No
Arsenic	0.00E-03	4.76E-07	4.76E-07	1.5E-06	No
Benzene	0.00E-03	2.19E-05	2.19E-05	8.0E-04	No
Beryllium	0.00E-03	2.85E-08	2.85E-08	2.8E-05	No
Cadmium	0.00E-03	2.62E-06	2.62E-06	3.7E-06	No
Formaldehyde	0.00E-03	1.78E-04	1.78E-04	5.1E-04	No
Nickel	0.00E-03	4.99E-06	4.99E-06	2.7E-05	No
PAH (except 7-PAH group)	0.00E-03	8.32E-08	8.32E-08	9.1E-05	No
POM (7-PAH) ^a	0.00E-03	2.71E-08	2.71E-08	2.0E-06	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.

None of the PTEs for carcinogenic TAP were exceeded as a result of this project. Therefore, modeling is not required for any carcinogenic TAP because none of 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)
Arsenic	4.75E-07	2.08E-06
Benzene	5.00E-06	2.19E-05
Beryllium	2.85E-08	1.25E-07
Cadmium	2.63E-06	1.15E-05
Chromium	3.33E-06	1.46E-05
Cobalt	2.00E-07	8.75E-07
Formaldehyde	1.78E-04	7.81E-04
Hexane	4.29E-03	1.88E-02
Manganese Dust	9.09E-05	3.98E-04
Manganese Fume	9.86E-04	4.32E-03
Naphthalene	1.45E-06	6.35E-06
Nickel	5.00E-06	2.19E-05
Selenium	5.71E-08	2.50E-07
Toluene	8.08E-06	3.54E-05
Totals	0.006	0.02

Ambient Air Quality Impact Analyses

As presented in the Modeling Memo in Appendix B, the estimated emission rates of one TAP from this project exceeded the applicable screening emission level (EL) and published DEQ modeling threshold established in IDAPA 58.01.01.585-586 and in the State of Idaho Air Quality Modeling Guideline¹. Refer to the Emissions Inventories section for additional information concerning the emission inventories.

¹ Criteria pollutant thresholds in Table 2, State of Idaho Guideline for Performing Air Quality Impact Analyses, Doc ID AQ-011, September 2013.

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

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	45.37	0.72	100	B
PM ₁₀	45.37	0.72	100	B
PM _{2.5}	45.37	0.72	100	B
SO ₂	0.006	0.01	100	B
NO _x	0.98	0.98	100	B
CO	0.42	0.42	100	B
VOC	3.52	3.52	100	B
HAP (single)	0.02	0.02	10	B
HAP (total)	0.02	0.02	25	B
Pb	negligible	negligible	100	B

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the proposed new emissions source. 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 PM emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Condition 2.4.

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, and VOC 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 not subject to any NSPS requirements 40 CFR Part 60.

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 is not subject to 40 CFR 63, Subpart HHHHHH because the paints used do not contain any target HAPs as defined in §63.11180.

The facility has proposed to operate as a minor source of hazardous air pollutant (HAP) emissions, and is subject to the requirements of 40 CFR 63, Subpart XXXXXX–National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Nine Metal Fabrication and Finishing Source Categories. The facility is primarily a fabricated structural metal manufacturer. DEQ is not delegated this Subpart. The applicable requirements of the subpart are highlighted in yellow.

40 CFR 63, Subpart XXXXXXNational 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.

- (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.*

Gayle Manufacturing primarily fabricates metal products and engages in the manufacturing of structural metal products which are listed as the nine source categories subject to the requirements of this Subpart. Therefore, this facility is subject to the requirements of Subpart XXXXXX.

(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.

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

Gayle Manufacturing performs welding with materials that contain MFHAP or that have the potential to emit MFHAP. In addition Gayle Manufacturing for the purposes of this Subpart is considered an existing affected source since the facility was in existence prior to April 3, 2008.

§ 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.

Gayle Manufacturing is an existing affected source. Therefore, Gayle Manufacturing was required to come into compliance with this Subpart by July 25, 2011 and states that the required documentation has been submitted to EPA Region 10 and DEQ.

§ 63.11516 *Standards and Compliance Requirements*

(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.

Gayle Manufacturing does not perform dry abrasive blasting of objects in a totally enclosed and unvented blast chambers. Therefore, this Subsection of Subpart XXXXXX does not apply and no further discussion is required.

(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."

Gayle Manufacturing does not perform dry abrasive blasting of objects in vented enclosures and dry abrasive blasting of objects greater than 8 feet (2.4 meters) in any one dimension.

(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.

Gayle Manufacturing does perform machining on materials that contain MFHAP or that have the potential to emit MFHAP. Compliance with these requirements is assured by permit condition 2.12.

(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.

Gayle Manufacturing does not perform dry grinding and dry polishing with machines. Therefore, this Subsection of Subpart XXXXXX does not apply and no further discussion is required.

(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.

Gayle Manufacturing does not perform spray painting with materials that contain MFHAP or that have the potential to emit MFHAP. Therefore, this Subsection of Subpart XXXXXX does not apply and no further discussion is required.

(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 exceedence 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 exceedence, 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 exceedence;

(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."

Gayle Manufacturing does perform welding. Compliance with these requirements is assured by permit condition 2.15.

§ 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.

Gayle Manufacturing is required to perform a visual determination of fugitive emissions. Compliance with these requirements is assured by permit condition 2.20.

(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.

Gayle Manufacturing does perform welding. Compliance with these requirements is assured by permit condition 2.21.

§ 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.

Gayle Manufacturing is required to perform notifications for this subpart. Compliance with these requirements is assured by permit condition 2.24.

(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 exceedances of any limitation in this subpart, its submission will be deemed to satisfy any obligation to report the same exceedances 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.

This facility is not a Title V source. Therefore, this Subsection of Subpart XXXXXX does not apply and no further discussion is required.

(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) Exceedences 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 exceedence occurred; and

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

Gayle Manufacturing is required to perform additional notifications for this subpart. Compliance with these requirements is assured by permit condition 2.24.

(9) Site-specific Welding Emissions Management Plan reporting. The permittee 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.

Gayle Manufacturing is required to perform additional notifications for welding emissions management. Compliance with these requirements is assured by PTC condition 2.25.

(c) What records must I keep?

The permittee 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.

Gayle Manufacturing does not perform spray painting with materials that contain MFHAP or that have the potential to emit MFHAP. Therefore, Sections (5) through (8) of Subpart XXXXXX do not apply.

(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.

Gayle Manufacturing is required to perform additional notifications for welding operations. Compliance with these requirements is assured by permit condition 2.23.

§ 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.*

This Section deals with implementation of the Subpart. Therefore, this Section of Subpart XXXXXX does not require permit requirements and no further discussion is required.

§ 63.11522 *What definitions apply to this subpart?*

The definitions of Subpart XXXXXX apply to this facility and no further discussion is required.

§ 63.11523 *What General Provisions apply to this subpart?*

Table 1 Table 2 to Subpart XXXXXX of Part 63—Applicability of General Provisions to Metal Fabrication or Finishing Area Sources

<i>Citation</i>	<i>Subject</i>
63.1 ¹	<i>Applicability.</i>
63.2	<i>Definitions.</i>
63.3	<i>Units and abbreviations.</i>
63.4	<i>Prohibited activities.</i>
63.5	<i>Construction/reconstruction.</i>
63.6(a), (b)(1)-(b)(5), (c)(1), (c)(2), (c)(5), (g), (i), (j)	<i>Compliance with standards and maintenance requirements.</i>
63.9(a)-(d)	<i>Notification requirements.</i>
63.10(a), (b) except for (b)(2), (d)(1), (d)(4)	<i>State authority and delegations.</i>
63.12	<i>State authority and delegations.</i>
63.13	<i>Addresses of State air pollution control agencies and EPA regional offices.</i>
63.14	<i>Incorporation by reference.</i>
63.15	<i>Availability of information and confidentiality.</i>
63.16	<i>Performance track provisions</i>

¹§63.11514(g), "Am I subject to this subpart?" exempts affected sources from the obligation to obtain title V operating permits.

Gayle Manufacturing is subject to the general provisions of this subpart. Compliance with these requirements is assured by permit condition 2.28.

Permit Conditions Review

This section describes the permit conditions for this initial permit.

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.

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 control devices be operated when welding and plasmarc cutting is conducted.

Initial Permit Condition 2.7 establishes that the space heaters shall only combust natural gas as fuel.

Initial Permit Condition 2.8 establishes that welding wire usage shall not exceed 95,000 lb/year and welding rod usage shall not exceed 1,000 lb/year during any consecutive 12 month period as submitted by the Applicant.

Initial Permit Condition 2.9 establishes that the coatings usage in the steel parts coating process shall not exceed 20 gallons/day of Steel Spec Weld-Thru Primer 2.3 and 30 gallons/day of Steel Spec Structural Steel Primer and 2,500 gallons/year of either primer and 700 gallons/year of acetone as submitted by the Applicant.

Initial Permit Condition 2.10 establishes that all coatings applied in the steel parts coating process shall be applied using with a minimum 60% transfer efficiency as submitted by the Applicant.

Initial Permit Condition 2.11 establishes that reasonable precaution be taken to prevent fugitive emissions as required by IDAPA 58.01.01.650-51.

Initial Permit Condition 2.12 establishes the definition of MFHAP as defined in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.13 establishes that no coatings containing target HAPs can be applied as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.14 establishes machining operation emissions management requirements as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.15 establishes welding emissions management requirements 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 and welding rod.

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 visible emissions monitoring general requirements as specified in 40 CFR 63 XXXXXX.

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

Initial Permit Condition 2.22 establishes general recordkeeping requirements as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.23 establishes requirements for recordkeeping for welding operations as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.24 establishes general notification requirements as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.25 establishes visible emission monitoring notification requirements as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.26 establishes reporting requirements as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 2.27 establishes the incorporation of federal requirements by reference.

Initial Permit Condition 2.28 establishes the general provisions as specified in 40 CFR 63 XXXXXX.

Initial Permit Condition 3.1 establishes that the duty to comply general compliance provision requires the permittee comply with all of the permit terms and conditions pursuant to Idaho Code §39-101.

Initial Permit Condition 3.2 establishes that the maintenance and operation general compliance provision requires the permittee maintain and operate all treatment and control facilities at the facility in accordance with IDAPA 58.01.01.211.

Initial Permit Condition 3.3 establishes that the obligation to comply general compliance provision specifies 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 3.4 establishes that the inspection and entry provision requires the permittee allow DEQ inspection and entry pursuant to Idaho Code §39-108.

Initial Permit Condition 3.5 establishes that the permit expiration construction and operation provision specifies 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 3.6 establishes that the notification of construction and operation provision requires the permittee notify DEQ of the dates of construction and operation, in accordance with IDAPA 58.01.01.211.03.

Initial Permit Condition 3.7 establishes that the performance testing notification of intent provision requires 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 3.8 establishes that the performance test protocol provision requires 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 3.9 establishes that the performance test report provision requires the permittee report any performance test results to DEQ within 60 days of completion, in accordance with IDAPA 58.01.01.157.04-05.

Initial Permit Condition 3.10 establishes that the monitoring and recordkeeping provision requires the permittee maintain sufficient records to ensure compliance with permit conditions, in accordance with IDAPA 58.01.01.211.

Initial Permit Condition 3.11 establishes that the excess emissions provision requires the permittee follow the procedures required for excess emissions events, in accordance with IDAPA 58.01.01.130-136.

Initial Permit Condition 3.12 establishes that the certification provision requires a responsible official certify all documents submitted to DEQ, in accordance with IDAPA 58.01.01.123.

Initial Permit Condition 3.13 establishes that the false statement provision requires no person make false statements, representations, or certifications, in accordance with IDAPA 58.01.01.125.

Initial Permit Condition 3.14 establishes that the tampering provision requires no person render inaccurate any required monitoring device or method, in accordance with IDAPA 58.01.01.126.

Initial Permit Condition 3.15 establishes that the transferability provision specifies this permit to construct is transferable, in accordance with the procedures of IDAPA 58.01.01.209.06.

Initial Permit Condition 3.16 establishes that the severability provision specifies 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

Gayle Manufacturing Company GMC-B
Emissions Summary

Table 1: Criteria Pollutant Summary

Pollutant	Unit	NG Heaters	Painting	Welding		Plasmac Cutting		Uncontrolled Total	Controlled Total	Below Regulatory Concern (10% of 8h CR) TSPV	Level 1	Controlled Emissions Exceeds BNC?
				Uncontrolled	Controlled	Uncontrolled	Controlled					
NOx	lb/hr	2,24E-01	NA	NA	NA	NA	NA	0.22	0.03	4.0	1.7	Below
CO	lb/hr	9.51E-02	NA	NA	NA	NA	NA	0.10	0.11	10.0	15.6	Below
PM10	lb/hr	1.81E-02	0.4	0.0	0.0	19.02	0.32	20.29	0.5	1.5	NA	Below
PM2.5	lb/hr	1.81E-02	0.4	0.0	0.33	19.69	0.32	20.29	0.6	1.2	9.25	Below
SO2	lb/hr	1.42E-03	NA	NA	NA	NA	NA	0.01	0.0	4.0	1.2	Below
Lead	lb/month	9.98E-04	NA	NA	NA	NA	NA	0.03	0.0	0.26	14	Below
VOC	lb/hr	1.31E-02	3.5	NA	NA	NA	NA	3.48	3.5	4.0	NA	Below
CO2e	tpy	1.24E	NA	NA	NA	NA	NA	1744.18	1744.2			

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

† Compare controlled emission estimates to threshold

‡ Used the annual hourly total and divided by 12 to calculate a monthly average

Table 2: Toxic Air Pollutants (TAPs) Summary

TAPs	EAS	NG Heaters		Welding (Controlled)		Painting		Plasmac Cutting (Controlled)		Total		Exceeds EL?	HAP
		(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)		
1,1,2,2-Tetrachloroethane	79.74-2	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
1,1,2-Trichloroethane	79.20-9	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
1,1-Dichloroethane	75.34-3	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
1,2-Dichloroethane	101.00-2	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
1,2-Dichloropropane	78.87-4	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
1,3-Butadiene	106.93-0	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
1,3-Dichloropropene	542.75-8	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
3-Methylchlorobenzene	66.49-6	4.28E-01	1.88E-01	NA	NA	NA	NA	NA	NA	4.28E-01	1.88E-01		X
Acetaldehyde	75.07-0	NA	NA	NA	NA	4.28E+00	2.00E+00	NA	NA	0.00E+00	0.00E+00		X
Acetone	67.64-1	NA	NA	NA	NA	NA	NA	NA	NA	4.29E+00	2.00E+00		X
Acrolin	107.02-8	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
Aseneic	7440.38-2	4.70E-03	2.08E-05	NA	NA	NA	NA	NA	NA	4.70E-03	2.08E-05		X
Barium	7440.39-3	1.05E-05	4.68E-05	3.02E-04	3.59E-05	NA	NA	NA	NA	3.12E-04	6.17E-05		X
Benzene	71.43-2	4.99E-06	2.19E-05	NA	NA	NA	NA	NA	NA	4.99E-06	2.19E-05		X
Beryllium	7440.41-7	2.85E-09	1.28E-07	NA	NA	NA	NA	NA	NA	2.85E-09	1.28E-07		X
Cadmium	7440.43-8	2.02E-06	1.15E-05	NA	NA	NA	NA	NA	NA	2.02E-06	1.15E-05		X
Carbon black	1333.80-4	NA	NA	0.00E+00	0.00E+00	1.40E-02	2.10E-02	NA	NA	1.40E-02	2.10E-02		X
Carbon Tetrachloride	56.23-5	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
Chlorobenzene	108.90-7	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
Chloroform	67.65-3	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
Chromium	7440.47-3	3.33E-06	1.48E-05	NA	NA	NA	NA	0.00E+00	0.00E+00	3.33E-06	1.48E-05		X
Cobalt	7440.48-4	2.00E-07	8.75E-07	NA	NA	NA	NA	NA	NA	2.00E-07	8.75E-07		X
Copper (dust, mist)	7440.50-9(a)	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
Copper (fume)	7440.50-9(b)	2.02E-06	8.85E-06	NA	NA	NA	NA	2.74E-04	0.04E-04	2.76E-04	6.17E-04		X
Crystalline Silica	14808.02-7	NA	NA	0.70E-04	7.90E-05	1.40E-02	2.10E-02	NA	NA	1.47E-02	2.11E-02	Exceeds	
Dichlorobenzene	95.50-1	2.85E-06	1.28E-05	NA	NA	NA	NA	NA	NA	2.85E-06	1.28E-05		X
Ethylbenzene	106.41-4	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
Ethylene Dibromide	106.93-4	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
Fluorides (as F)	10984.48-0	NA	NA	4.09E-03	4.85E-04	NA	NA	NA	NA	4.09E-03	4.85E-04		X
Formaldehyde	50.00-0	1.78E-04	7.81E-04	NA	NA	NA	NA	NA	NA	1.78E-04	7.81E-04		X
Hexane	110.54-3	4.28E-03	1.88E-02	NA	NA	NA	NA	NA	NA	4.28E-03	1.88E-02		X
Iron oxide fume	13309.37-1	NA	NA	3.02E-04	3.59E-05	NA	NA	NA	NA	3.02E-04	3.59E-05		X
Iron salts, soluble as Fe	7439.89-6	NA	NA	1.51E-03	1.79E-04	NA	NA	1.43E-02	1.15E-02	1.56E-02	3.17E-02		X
Magnesium Oxide	1329.48-4	NA	NA	3.02E-04	3.59E-05	NA	NA	NA	NA	3.02E-04	3.59E-05		X
Magnesium dust	7430.80-5(a)	NA	NA	3.59E-05	3.98E-04	NA	NA	NA	NA	3.59E-05	3.98E-04		X
Manganese fume	7439.95-9(a)	0.04E-07	3.96E-07	NA	NA	NA	NA	1.98E-03	4.31E-03	1.99E-03	4.32E-03		X
Methanol	67.58-1	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
Methylmercury Chloride	75.09-2	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
Methylmercury	7429.98-7	2.62E-06	1.15E-05	NA	NA	NA	NA	NA	NA	2.62E-06	1.15E-05		X
Naphthalene	91.20-3	1.45E-06	0.35E-06	NA	NA	NA	NA	NA	NA	1.45E-06	0.35E-06		X
Nickel	7440.02-0	4.99E-07	2.19E-05	NA	NA	NA	NA	0.00E+00	0.00E+00	4.99E-07	2.19E-05		X
Zinc Oxide	1314.13-2	NA	NA	NA	NA	4.67E-01	7.01E-01	NA	NA	4.67E-01	7.01E-01		X
PAH except 7-PAH group	total Other PAH	5.33E-08	3.65E-07	NA	NA	NA	NA	NA	NA	5.33E-08	3.65E-07		X
7-PAH (ketown list)	total 7-PAH	2.71E-06	1.19E-07	NA	NA	NA	NA	NA	NA	2.71E-06	1.19E-07		X
Perene	104-60-0	6.18E-03	2.71E-02	NA	NA	NA	NA	NA	NA	6.18E-03	2.71E-02		X
Selenium	7782-49-2	5.71E-09	2.50E-07	NA	NA	NA	NA	NA	NA	5.71E-09	2.50E-07		X
Silicon	7440.21-3	NA	NA	4.93E-04	5.38E-05	NA	NA	NA	NA	4.93E-04	5.38E-05		X
Styrene	106.42-5	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
Toluene	108.88-3	8.09E-06	3.54E-05	NA	NA	NA	NA	NA	NA	8.09E-06	3.54E-05		X
Vanadium	1314.82-1	5.47E-06	2.40E-05	NA	NA	NA	NA	NA	NA	5.47E-06	2.40E-05		X
Vinyl Chloride	75.01-4	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
Xylene	1330.20-7	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00		X
Zinc	7440.60-6	0.90E-05	3.02E-04	NA	NA	NA	NA	NA	NA	0.90E-05	3.02E-04		X
Facility Wide Total HAPs										0.01	0.02		

Note: Mercury is no longer listed in SDWA 58.01 01 200508

1 SDWA 58.01 01 080508 Screening Emission Level

2 SDWA 58.01 01 1205 Acceptable Ambient Concentration (AAC) 24-hour average

3 SDWA 58.01 01 580 Acceptable Ambient Concentration for Carcinogens (AACCC) annual average

Gayle Manufacturing Company GMC-B

Natural Gas Heater Emissions

Natural Gas Heating Value (BTU/s: 1,020

		Plant		Office Additions		Office Original		Total	
Model									
Number of Units		10		2		2			
Heat Input (MMBTU/hr)		0.2		0.09		0.12			
Natural Gas Usage (scf/hr)		1,961		182		235			
Natural Gas Usage (10 ³ scf/hr)		0.0020		0.0002		0.00024			
Annual Hours of Operations (hrs/yr) ¹		8,760		8,760		8,760			
Criteria Pollutants	Emission Factor ¹								
	(lb/10 ³ scf)	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
NO _x	94	1.84E-01	8.07E-01	1.71E-02	7.51E-02	2.21E-02	9.69E-02	2.24E-01	9.79E-01
CO	40	7.84E-02	3.44E-01	7.29E-03	3.19E-02	9.41E-03	4.12E-02	9.51E-02	4.17E-01
PM ^{2.5}	7.6	1.49E-02	6.53E-02	1.39E-03	6.07E-03	1.79E-03	7.83E-03	1.81E-02	7.92E-02
SO ₂	0.6	1.18E-03	5.15E-03	1.09E-04	4.79E-04	1.41E-04	6.18E-04	1.43E-03	6.25E-03
VOC	5.5	1.08E-02	4.72E-02	1.00E-03	4.39E-03	1.29E-03	5.67E-03	1.31E-02	5.73E-02
HAP Emissions	(lb/10 ³ scf)	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
2-Methylnaphthalene	2.40E-06	4.71E-08	2.06E-07	4.38E-09	1.92E-08	5.66E-09	2.47E-08	6.71E-08	2.50E-07
3-Methylchloranthene	1.80E-06	3.53E-09	1.55E-08	3.28E-10	1.44E-09	4.24E-10	1.86E-09	4.28E-09	1.88E-08
7,12-Dimethylbenz(a)anthracene	1.60E-05	3.14E-08	1.37E-07	2.92E-09	1.28E-08	3.76E-09	1.65E-08	3.81E-08	1.67E-07
7-PAH group		2.24E-08	9.79E-08	2.08E-09	9.11E-09	2.68E-09	1.17E-08	2.71E-08	1.19E-07
Benzo(a)anthracene	1.80E-06	3.53E-09	1.55E-08	3.28E-10	1.44E-09	4.24E-10	1.86E-09	4.28E-09	1.88E-08
Benzo(b)fluoranthene	1.80E-06	3.53E-09	1.55E-08	3.28E-10	1.44E-09	4.24E-10	1.86E-09	4.28E-09	1.88E-08
Benzo(k)fluoranthene	1.80E-06	3.53E-09	1.55E-08	3.28E-10	1.44E-09	4.24E-10	1.86E-09	4.28E-09	1.88E-08
Dibenzo(a,h)anthracene	1.20E-06	2.35E-09	1.03E-08	2.19E-10	9.58E-10	2.82E-10	1.24E-09	2.85E-09	1.25E-08
Chrysene	1.80E-06	3.53E-09	1.55E-08	3.28E-10	1.44E-09	4.24E-10	1.86E-09	4.28E-09	1.88E-08
Indeno(1,2,3-cd)pyrene	1.80E-06	3.53E-09	1.55E-08	3.28E-10	1.44E-09	4.24E-10	1.86E-09	4.28E-09	1.88E-08
Benzo(a)pyrene	1.20E-06	2.35E-09	1.03E-08	2.19E-10	9.58E-10	2.82E-10	1.24E-09	2.85E-09	1.25E-08
Other-PAH (exclude 7-PAH)		6.86E-08	3.01E-07	6.38E-09	2.80E-08	8.24E-09	3.61E-08	8.32E-08	3.65E-07
Acenaphthene	1.80E-06	3.53E-09	1.55E-08	3.28E-10	1.44E-09	4.24E-10	1.86E-09	4.28E-09	1.88E-08
Acenaphthylene	1.80E-06	3.53E-09	1.55E-08	3.28E-10	1.44E-09	4.24E-10	1.86E-09	4.28E-09	1.88E-08
Anthracene	2.40E-06	4.71E-09	2.06E-08	4.38E-10	1.92E-09	5.66E-10	2.47E-09	6.71E-09	2.50E-08
Fluoranthene	3.00E-06	5.88E-09	2.58E-08	5.47E-10	2.40E-09	7.06E-10	3.09E-09	7.14E-09	3.13E-08
Fluorene	2.80E-06	5.49E-09	2.40E-08	5.11E-10	2.24E-09	6.59E-10	2.89E-09	6.66E-09	2.92E-08
Phenanthrene	1.70E-05	3.33E-08	1.46E-07	3.10E-09	1.38E-08	4.00E-09	1.75E-08	4.04E-08	1.77E-07
Pyrene	5.00E-06	9.80E-09	4.29E-08	9.12E-10	3.99E-09	1.18E-09	5.16E-09	1.19E-08	5.21E-08
Benzo(g,h,i)perylene	1.20E-06	2.35E-09	1.03E-08	2.19E-10	9.58E-10	2.82E-10	1.24E-09	2.85E-09	1.25E-08
Benzene	2.10E-03	4.12E-06	1.80E-05	3.83E-07	1.68E-06	4.94E-07	2.16E-06	4.99E-06	2.19E-05
Butane	2.10E+00	4.12E-03	1.80E-02	3.83E-04	1.68E-03	4.94E-04	2.16E-03	4.99E-03	2.19E-02
Dichlorobenzene	1.20E-03	2.35E-06	1.03E-05	2.19E-07	9.58E-07	2.82E-07	1.24E-06	2.85E-06	1.25E-05
Ethane	3.10E+00	6.08E-03	2.66E-02	5.65E-04	2.48E-03	7.29E-04	3.19E-03	7.37E-03	3.23E-02
Formaldehyde	7.50E-02	1.47E-04	6.44E-04	1.37E-05	5.99E-05	1.76E-05	7.73E-05	1.78E-04	7.81E-04
Hexane	1.80E+00	3.53E-03	1.55E-02	3.28E-04	1.44E-03	4.24E-04	1.86E-03	4.28E-03	1.88E-02
Naphthalene	6.10E+04	1.20E-06	5.24E-06	1.11E-07	4.87E-07	1.44E-07	6.29E-07	1.45E-06	6.35E-06
Pentane	2.60E+00	5.10E-03	2.23E-02	4.74E-04	2.08E-03	6.12E-04	2.68E-03	6.18E-03	2.71E-02
Propane	1.60E+00	3.14E-03	1.37E-02	2.92E-04	1.28E-03	3.76E-04	1.65E-03	3.81E-03	1.67E-02
Toluene	3.40E-03	6.67E-06	2.92E-05	6.20E-07	2.72E-06	8.00E-07	3.50E-06	8.09E-06	3.54E-05
Arsenic	2.00E-04	3.92E-07	1.72E-06	3.65E-08	1.60E-07	4.71E-08	2.06E-07	4.76E-07	2.08E-06
Barium	4.40E-03	8.63E-06	3.78E-05	8.02E-07	3.51E-06	1.04E-06	4.53E-06	1.05E-05	4.58E-05
Beryllium	1.20E-05	2.35E-08	1.03E-07	2.19E-09	9.58E-09	2.82E-09	1.24E-08	2.85E-08	1.26E-07
Cadmium	1.10E-03	2.16E-06	9.45E-06	2.01E-07	8.79E-07	2.59E-07	1.13E-06	2.62E-06	1.15E-05
Chromium	1.40E-03	2.75E-06	1.20E-05	2.55E-07	1.12E-06	3.29E-07	1.44E-06	3.33E-06	1.46E-05
Cobalt	8.40E-05	1.65E-07	7.21E-07	1.53E-08	6.71E-08	1.99E-08	8.66E-08	2.00E-07	8.75E-07
Copper	8.50E-04	1.67E-06	7.30E-06	1.55E-07	6.79E-07	2.00E-07	8.76E-07	2.02E-06	8.85E-06
Manganese	3.80E-04	7.45E-07	3.26E-06	6.93E-08	3.04E-07	8.94E-08	3.92E-07	9.04E-07	3.96E-06
Mercury	2.60E-04	5.10E-07	2.23E-06	4.74E-08	2.08E-07	6.12E-08	2.68E-07	6.18E-07	2.71E-06
Molybdenum	1.10E-03	2.16E-06	9.45E-06	2.01E-07	8.79E-07	2.59E-07	1.13E-06	2.62E-06	1.15E-05
Nickel	2.10E-03	4.12E-06	1.80E-05	3.83E-07	1.68E-06	4.94E-07	2.16E-06	4.99E-06	2.19E-05
Selenium	2.40E-05	4.71E-08	2.06E-07	4.38E-09	1.92E-08	5.66E-09	2.47E-08	6.71E-08	2.50E-07
Vanadium	2.30E-03	4.51E-06	1.98E-05	4.19E-07	1.84E-06	5.41E-07	2.37E-06	5.47E-06	2.40E-05
Zinc	2.90E-02	5.69E-05	2.49E-04	5.29E-06	2.32E-05	6.82E-06	2.99E-05	6.90E-05	3.02E-04
Lead	0.0005	9.80E-07	4.29E-06	9.12E-08	3.99E-07	1.18E-07	5.16E-07	1.19E-06	5.21E-06
TAP Totals		2.22E-02	9.73E-02	2.07E-03	9.05E-03	2.66E-03	1.17E-02	2.69E-02	1.18E-01

GHG Emissions

	kg/MMBtu ⁴	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
CO ₂	53.06	234	1,025	22	95	28	123	2,84E+02	1.24E+03
CH ₄	1.00E-03	0.00	0.019	0.00	0.002	0.00	0.002	5.35E-03	2.34E-02
N ₂ O	1.00E-04	0.00	0.002	0.00	0.000	0.00	0.000	5.35E-04	2.34E-03
CO ₂ e			1,028		95		123		1,244

Notes

- (1) Emission Factors from AP-42, Tables 1.4-1, 1.4-2, 1.4-3 and 1.4-4 (July 1998)
- (2) Assume 24 hour/day operation, 6 days per week, 52 weeks per year minus 6 holidays
- (3) Assume Total PM equals PM10 and PM2.5
- (4) GHG emission factors from Climate Registry 2014 Default Emission Factors, Table 12.1 and 12.9.

Sample Calculation:

Emission rate (tpy) = NG Usage (10⁶ scf/hr) * Annual Hours of Operation (hrs) * Emission Factor (lb/10⁶ scf) * 1 ton/2000 lb

Emission rate (lb/hr) = Emission rate (tpy) * 2000 lb/ton * 1 yr/8760 hours of operation

Gayle Manufacturing Company GMC-B

Welding Emissions

Throughput Weld Wire	95,000 lbs	Throughput Welding Rod	1,000 lbs
Peak Hour Weld Wire ¹	400 lb/hr	Peak Hour Weld Rod ¹	10 lb/hr
Hours of Operation ²	8,760 hrs	Hours of Operation ²	8,760 hrs
HEPA filter on fans ³	99.5%		

PM Emissions

Emissions	Wire Welding Uncontrolled			Wire Welding Controlled		Rod Welding Uncontrolled			Rod Welding Controlled	
	EF lb/1000 lb of Electrode ⁴	PM (lb/hr)	PM (tpy)	PM (lb/hr)	PM (tpy)	EF lb/1000 lb of Electrode ⁴	PM (lb/hr)	PM (tpy)	PM (lb/hr)	PM (tpy)
PM	15.1	6.0	0.72	0.03	0.004	18.40	7.36	0.87	0.04	0.004

Wire Welding Pollutants	Aluminum including metal & oxides	Barium, soluble compounds, as Ba	Carbon black	Iron salts, soluble, as FE (Carbon Steel Tube)	Iron Oxide	Fluorides (as F)	Limestone	Magnesium	Magnesium oxide fume	manganese and/or manganese alloys and compounds (as Mn) Dust or Fume	Kaolin (respirable dust)	Quartz	Silicon and/or silicon alloys and compounds (as Si)	Zirconium alloys and compounds (as Zr)
CAS	7429-90-5	7440-39-3	1333-86-4	7439-89-6	1309-37-1	16984-48-4	1317-65-3	7439-95-4	1309-48-4	7439-96-5	1332-58-7	14808-60-7	7440-21-3	12004-83-0
Electrode ⁵	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Innershield NR-311 (GMC Electrode (1) 7-64 Innershield)	5	1		80	1	5	5	5		1			<0.5	1
Outershield XLH-70 (GMC Electrode (2) 3-32 outershield)				75		1		1		5		1		1
UltraCore 71C (GMC Electrode (3) .045 outershield)	1			75	1	<0.5	<5	1		5				1.5
Murematic S4, 0.035 in				80						5				
Maximum	5	1	0	80	1	5	5	5	1	5	0	1	1.5	1

Rod Welding Pollutants	Aluminum including metal & oxides	Barium, soluble compounds, as Ba	Carbon black	Iron salts, soluble, as FE (Carbon Steel Tube)	Iron Oxide	Fluorides (as F)	Limestone	Magnesium	Magnesium oxide fume	manganese and/or manganese alloys and compounds (as Mn) Dust or Fume	Kaolin (respirable dust)	Quartz	Silicon and/or silicon alloys and compounds (as Si)	Zirconium alloys and compounds (as Zr)
CAS	7429-90-5	7440-39-3	1333-86-4	7439-89-6	1309-37-1	16984-48-4	1317-65-3	7439-95-4		7439-96-5	1332-58-7	14808-60-7	7440-21-3	12004-83-0
Electrode ⁵	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Jetweld LH-70, 1/8 in (rod)				80		7				5		1		

TAP Emissions

Compounds	CAS	Wire Weld Uncontrolled		Wire Weld Controlled		Rod Weld Uncontrolled		Rod Weld Controlled		Controlled Welding Emissions lb/hr	Controlled Welding Emissions (tpy)	Idaho TAP Screening Emissions Level lb/hr	Exceed EL?
		(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)				
Aluminum including metal & oxides	7429-90-5	0.30	0.04	1.51E-03	1.79E-04	0.00	0.00	0.00E+00	0.00E+00	1.51E-03	1.79E-04	0.667	
Barium, soluble compounds, as Ba	7440-39-3	0.06	0.01	3.02E-04	3.59E-05	0.00	0.00	0.00E+00	0.00E+00	3.02E-04	3.59E-05	0.033	
Carbon black	1333-86-4	0.00	0.00	0.00E+00	0.00E+00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.23	
Iron salts, soluble, as FE (Carbon Steel Tube)	7789-75-5	4.83	0.57	2.42E-02	2.87E-03	5.89	0.70	2.94E-02	3.50E-03	5.36E-02	6.37E-03	0.167	
Iron Oxide	1309-37-1	0.06	0.01	3.02E-04	3.59E-05	0.00	0.00	0.00E+00	0.00E+00	3.02E-04	3.59E-05	1.167	
Fluorides (as F)	16984-48-4	0.30	0.04	1.51E-03	1.79E-04	0.52	0.06	2.58E-03	3.06E-04	4.09E-03	4.85E-04	0.067	
Iron salts, soluble, as Fe	7439-89-6	0.30	0.04	1.51E-03	1.79E-04	0.00	0.00	0.00E+00	0.00E+00	1.51E-03	1.79E-04	0.667	
Limestone and/or calcium carbonate	546-93-0	0.30	0.04	1.51E-03	1.79E-04	0.00	0.00	0.00E+00	0.00E+00	1.51E-03	1.79E-04	0.667	
Magnesium oxide fume	1309-48-4	0.06	0.01	3.02E-04	3.59E-05	0.00	0.00	0.00E+00	0.00E+00	3.02E-04	3.59E-05	0.333	
Manganese and/or manganese alloys and compounds (as Mn) Dust or fume	7439-96-5(d)	0.30	0.04	1.51E-03	1.79E-04	0.37	0.04	1.84E-03	2.19E-04	3.35E-03	3.98E-04	0.067	
Kaolin (respirable dust)	1332-58-7	0.00	0.00	0.00E+00	0.00E+00	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.133	
Quartz	14808-60-7	0.06	0.01	3.02E-04	3.59E-05	0.07	0.01	3.68E-04	4.37E-05	6.70E-04	7.96E-05	0.0067	
Silicon and/or silicon alloys and compounds (as Si)	7440-21-3	0.09	0.01	4.53E-04	5.38E-05	0.00	0.00	0.00E+00	0.00E+00	4.53E-04	5.38E-05	0.667	
Zirconium alloys and compounds (as Zr)	12004-83-0	0.06	0.01	3.02E-04	3.59E-05	0.00	0.00	0.00E+00	0.00E+00	3.02E-04	3.59E-05	0.333	

Notes
 (1) Based on emails from David DeBlasio, dated March 8, 2017.
 (2) Assuming maximum possible operation
 (3) Control efficiency for PM, based on RoboVent spec sheet.
 (4) Emission Factor from AP-42 Table 12.19-1 and 12.19-2. Maximum emission factor of the FCAW (Innershield, Outershield, and UltraCore) E70T and E71T types and GMAW (Murematic S4) ER-705.
 (5) Percentages from provided MSDSs
 (6) Assume Total PM equals PM10 and PM2.5
 Sample Calculation:
 Uncontrolled emission rate (lb/hr)=Hourly throughput (lb/1000 * EF (lb/1000 lb of electrode)
 Uncontrolled emission rate (tpy)=annual throughput (lb/1000 * EF (lb/1000 lb of electrode)
 Controlled emission rate = uncontrolled emission rate * (1- control efficiency%)

Gayle Manufacturing Company GMC-B

Plasmarc Cutter Emissions

Kerf Weight (Mild Steel)

Amperage	Inch	Kerf Width	KERF Volume per Inch Cut	Cut Speeds	Kerf Volume	Kerf Weight Per Cutting Machine	Worst Case Kerf Weight Per Cutting Machine
	Inch	Inch	Inch ² /Inch	Inch/min	Inch ³ /min	lb/hr	lb/hr
200	0.25	0.2	0.050	200	10.000	170.4	196.0
	0.5	0.2	0.100	115	11.500	196.0	
	1	0.2	0.200	45	9.000	153.4	
	2	0.2	0.400	10	4.000	68.2	

Note:

1. Plate thickness and cutting speed of each machine were obtained from operating data of Hypertherm HyPerformance Plasma HPR260XD and HPR400XD.
2. Kerf width was estimated to be 0.2 inches (5 mm)
3. Steel density used: 0.284 lb/inch³

PM and TAP Emissions from Fume

		200 AMP (Plateline)				200 AMP (Slicer)				Total				
Number of Machines		1				1								
Operating hours		8760				40								
PM Control Efficiency ²		99.9%				99.9%								
Pollutant ¹	CAS #	Fumes from Plasmarc Cutting % in Plate	Uncontrolled emissions		Controlled Emissions		Uncontrolled emissions		Controlled Emissions		Uncontrolled emissions		Controlled Emissions	
			lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy		
PM10/PM2.5	NA	100%	9.798	42.915	0.010	0.043	9.798	0.196	0.010	0.000	19.596	43.111	0.020	0.043
Chromium	7440-47-3	0.0%	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Copper (fume)	7440-50-8(f)	1.4%	0.137	0.601	0.000	0.001	0.137	0.003	0.000	0.000	0.274	0.604	0.000	0.001
Iron	7439-89-6	73.0%	7.153	31.328	0.007	0.031	7.153	0.143	0.007	0.000	14.305	31.471	0.014	0.031
Manganese	7439-96-5(f)	10.0%	0.980	4.292	0.001	0.004	0.980	0.020	0.001	0.000	1.960	4.311	0.002	0.004
Nickel	7440-02-0	0.0%	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

PM emissions 0.05 lb/lb kerf

1. Source: PM emissions were based on the ratio of emitted fume to the total kerf amount (5%) based on US EPA AP-42, Volume I, Chapter 12: Metallurgical Industry <http://www.epa.gov/ttn/chieff/efdocs/welding.pdf>

2. Percentage of each Idaho TAP fume listed in US EPA Volume I, Chapter 12: Metallurgical Industry <http://www.epa.gov/ttn/chieff/efdocs/welding.pdf>

3. Based on Manufacturer Spec (Donaldson Torit) for Dust Collector. Based on Donaldson Torit, Ultra Web II filters rated at 99.999% on 0.5 micron filters. Assume 99.9% for conservatism. See Torit Filter Cartridge Spec Sheet.

Gayle Manufacturing Company GMC-B

Painting Criteria Emissions

Paint Maximum Throughput ¹	2,500 gal/yr	Acetone throughput	700 gal/yr
Paint Maximum Throughput ¹	20 gal/day	Acetone throughput	15 gal/day
Density	14.01 lb/gal		
Paint Gun Transfer Efficiency ²	60%		

VOCs

Coating	VOC Content (lb/gal) ³	VOC Emitted (lb/hr)	VOC Emitted (tpy)
Steel Spec Weld-Thru Primer 2.3 Red Oxide	1.9	1.6	2.4

Notes

- (1) Projected based on permitted production levels at GMC-Nampa.
- (2) The Graco Airless Spray Guns have a transfer efficiency ranging from 60-90%.
- (3) VOC content listed in Environmental data sheet, Steel Spec Weld-Thru Primer 2.3 Red Oxide.

Sample Calculation:

Emission rate (lb/hr)=Throughput (gal/day) * 24 hr/day * VOC Content (lb/gal)
 Emission rate (tpy)=Throughput (gal/yr) * VOC Content (lb/gal) / 2000 lbs/ton

PM

Product	Solids Content (%) ¹	PM Emitted (lb/hr)	PM Emitted (tpy)
Steel Spec Weld-Thru Primer 2.3 Red Oxide	8.4	0.4	0.59

Notes

- (1) Solids content listed in Environmental data sheet provided by client
- All PM is assumed to be PM10 and PM2.5.

Sample Calculation:

Emission rate (lb/hr)=Throughput (gal/day) / 24 hr/day * Solids Content (%) * Density (lb/gal) * (1-transfer efficiency)
 Emission rate (tpy)=Throughput (gal/yr) * Solids Content (%) * Density (lb/gal) * (1-transfer efficiency) / 2000 lbs/ton

TAPs

Product	Zinc Oxide Content (%) ¹	Carbon Black Content (%) ²	Acetone Content (%) ³	Crystalline Silica (%) ⁴
Steel Spec Weld-Thru Primer 2.3 Red Oxide	10	0.3	4.5	0.3
Acetone	0	0	100	

Notes

- (1) TAP content listed in Environmental data sheet provided by client

TAPs

Product	Zinc Oxide Emitted (lb/hr)	Zinc Oxide Emitted (tpy)	Carbon Black Emitted (lb/hr)	Carbon Black Emitted (tpy)	Acetone Emitted (lb/hr)	Acetone Emitted (tpy)	Crystalline Silica Emitted (lb/hr)	Crystalline Silica Emitted (tpy)
Steel Spec Weld-Thru Primer 2.3 Red Oxide	0.5	0.70	0.01	0.02	0.2	0.32	0.01401	0.02
Acetone	-	-	-	-	4.1	2.3	-	-

Notes

Sample Calculation:

Emission rate (lb/hr)=Throughput (gal/day) / 24 hr/day * TAP Content (%) * Density (lb/gal) * (1-transfer efficiency)
 Emission rate (tpy)=Throughput (gal/yr) * TAP Content (%) * Density (lb/gal) * (1-transfer efficiency) / 2000 lbs/ton
 Acetone Emission Rate (lb/hr): Throughput (gal/day) / 24 hr/day * TAP Content (%) * Density (lb/gal) * (1-transfer efficiency)
 Acetone Emission Rate (tpy): Throughput (gal/yr) * TAP Content (%) * Density (lb/gal) * (1-transfer efficiency) / 2000 lbs/ton
 Acetone density: 6.53 lb/gal

Gayle Manufacturing Company GMC-B

Painting Criteria Emissions - Alternate Primer

Paint Maximum Throughput¹ 2,500 gal/yr
 Paint Maximum Throughput¹ 30 gal/day
 Density 12.35 lb/gal
 Paint Gun Transfer Efficiency² 60%

VOCs

Coating	VOC Content (lb/gal) ³	VOC Emitted (lb/hr)	VOC Emitted (tpy)
Steel Spec Structural Steel Primer, Gray	2.77	3.5	3.5

Notes

(1) GMC-Nampa will use either Weld-Thru Primer, Red Oxide 2.3 or Structural Steel Primer, Gray. The maximum permitted throughput should be based on 2,000 gal/yr total. For emission purposes, the highest criteria pollutants will be reported in the summary table.

(2) The Graco Airless Spray Guns have a transfer efficiency ranging from 65-90%.

(3) VOC content listed in Environmental data sheet, Steel Spec Weld-Thru Primer 2.3 Red Oxide.

Sample Calculation:

Emission rate (lb/hr)=Throughput (gal/day) * 24 hr/day * VOC Content (lb/gal)

Emission rate (tpy)=Throughput (gal/yr) * VOC Content (lb/gal) / 2000 lbs/ton

PM (as Titanium Dioxide)

Product	Solids Content (%) ¹	PM Emitted (lb/hr)	PM Emitted (tpy)
Steel Spec Structural Steel Primer, Gray	2.0	0.1	0.12

Notes

(1) Solids content listed in Environmental data sheet provided by client

All PM is assumed to be PM10 and PM2.5.

Sample Calculation:

Emission rate (lb/hr)=Throughput (gal/day) / 24 hr/day * Solids Content (%) * Density (lb/gal) * (1-transfer e

Emission rate (tpy)=Throughput (gal/yr) * Solids Content (%) * Density (lb/gal) * (1-transfer efficiency) / 200

APPENDIX B – AMBIENT AIR QUALITY IMPACT ANALYSES

MEMORANDUM

DATE: July 28, 2017
TO: Kelli Wetzel, Permit Writer, Air Program
FROM: Kevin Schilling, Stationary Source Modeling Coordinator, Air Program
PROJECT: P-2017.0030 PROJ 61892, PTC for Gayle Manufacturing Company
SUBJECT: Demonstration of Compliance with IDAPA 58.01.01.203.02 (NAAQS) and 203.03 (TAPs) as it relates to air quality impact analyses.

Contents

Acronyms, Units, and Chemical Nomenclature2
1.0 Summary3
2.0 Background Information.....4
 2.1 Air Impact Analysis Required for All Permits to Construct.....4
 2.2 Significant Impact Level and Cumulative NAAQS Impact Analyses5
 2.3 Toxic Air Pollutant Analysis.....5
3.0 Analytical Methods and Data7
 3.1 Emissions Source Data7
 3.1.1. Modeling Applicability and Modeled Criteria Pollutant Emissions Rates7
 3.1.2. Toxic Air Pollutant Emissions Rates.....9
 3.1.3. DEQ Review10
4.0 NAAQS Impact Modeling Results11
 4.1 Results for NAAQS Analyses11
 4.2 Results for TAPs Impact Analyses11
5.0 Conclusions11
References.....12

Acronyms, Units, and Chemical Nomenclature

AAC	Acceptable Ambient Concentration of a non-carcinogenic TAP
AACC	Acceptable Ambient Concentration of a Carcinogenic TAP
Appendix W	40 CFR 51, Appendix W – Guideline on Air Quality Models
BPIP	Building Profile Input Program
BRC	Below Regulatory Concern
CFR	Code of Federal Regulations
CMAQ	Community Multi-Scale Air Quality modeling system
CO	Carbon Monoxide
DEQ	Idaho Department of Environmental Quality
EL	Emissions Screening Level of a TAP
EPA	United States Environmental Protection Agency
Gayle	Gayle Manufacturing Company
Idaho Air Rules	Rules for the Control of Air Pollution in Idaho, located in the Idaho Administrative Procedures Act 58.01.01
lb/hr	Pounds per hour
NAAQS	National Ambient Air Quality Standards
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen
O ₃	Ozone
Pb	Lead
PM ₁₀	Particulate matter with an aerodynamic particle diameter less than or equal to a nominal 10 micrometers
PM _{2.5}	Particulate matter with an aerodynamic particle diameter less than or equal to a nominal 2.5 micrometers
ppb	parts per billion
PTC	Permit to Construct
PTE	Potential to Emit
SIL	Significant Impact Level
SO ₂	Sulfur Dioxide
TAP	Toxic Air Pollutant
VOC	Volatile Organic Compounds
µg/m ³	Micrograms per cubic meter of air

1.0 Summary

Gayle Manufacturing Company (Gayle) submitted a Permit to Construct (PTC) modification application for their existing structural steel fabrication plant located in Nampa, Idaho. Project-specific air quality analyses involving atmospheric dispersion modeling of estimated emissions associated with the facility were submitted to DEQ to demonstrate that emissions increases associated with facility operations would not cause or significantly contribute to a violation of any applicable ambient air quality standard as required by the Idaho Administrative Procedures Act 58.01.01.203.02 and 203.03 (Idaho Air Rules Section 203.02 and 203.03). This memorandum provides a summary of DEQ's review of the ambient air impact analyses submitted with the permit application.

CH2M Hill, Inc. (CH2M), on behalf of Gayle, prepared the PTC application and performed the ambient air impact analyses for this project to demonstrate compliance with applicable National Ambient Air Quality Standards (NAAQS) and Toxic Air Pollutant (TAP) increments. The DEQ review of submitted data and analyses summarized by this memorandum addressed only the rules, policies, methods, and data pertaining to the air impact analyses used to demonstrate that estimated emissions associated with operation of the facility will not cause or significantly contribute to a violation of any applicable air quality standard. This review did not address/evaluate compliance with other rules or analyses not pertaining to the air impact analyses. Evaluation of emissions estimates was the responsibility of the DEQ permit writer and is addressed in the main body of the DEQ Statement of Basis, and emissions calculation methods were not evaluated in this modeling review memorandum.

The submitted information and analyses: 1) showed either a) that estimated potential/allowable emissions are at a level defined as below regulatory concern (BRC) and do not require a NAAQS compliance demonstration, or b) that criteria pollutant emissions increases resulting from the proposed project are below site-specific modeling applicability thresholds, developed to assure that emissions below such levels will not result in ambient air impacts exceeding Significant Impact Levels (SILs); 2) showed that 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.

Idaho Air Rules require air impact analyses be conducted in accordance with methods outlined in 40 CFR 51, Appendix W *Guideline on Air Quality Models* (Appendix W). Appendix W requires that air quality impacts be assessed using atmospheric dispersion models with emissions and operations representative of design capacity or as limited by a federally enforceable permit condition. The submitted information and analyses demonstrated to the satisfaction of the Department that operation of the proposed project 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. The DEQ permit writer should use Table 1 and other information presented in this memorandum to generate appropriate permit provisions/restrictions to assure the requirements of Appendix W are met regarding emissions representative of design capacity or permit allowable rates.

Table 1. KEY ASSUMPTIONS USED IN MODELING ANALYSES	
Criteria/Assumption/Result	Explanation/Consideration
General Emissions Rates. Emissions rates used in the air impact analyses, as listed in this memorandum, must represent maximum potential emissions as given by design capacity, inherently limited by the nature of the process or configuration of the facility, or as limited by the issued permit for the specific pollutant and averaging period.	Compliance has not been demonstrated for emissions rates greater than those used in the air impact analyses.
TAP Emissions Sources. TAP emissions sources, as constructed and operated, must be accurately represented by the analyses submitted with the PTC application.	Important parameters include release point locations and release height.

Summary of Submittals and Actions

- May 24, 2017: Application received by DEQ.
- May 25, 2017: Regulatory Start Date.
- June 23, 2017: Application determined complete by DEQ.

2.0 Background Information

Background information on the project and the air impact analyses was provided in the Modeling Analysis Report submitted with the application.

2.1 Air Impact Analyses Required for All Permits to Construct

Idaho Air Rules Sections 203.02 and 203.03:

No permit to construct shall be granted for a new or modified stationary source unless the applicant shows to the satisfaction of the Department all of the following:

02. NAAQS. *The stationary source or modification would not cause or significantly contribute to a violation of any ambient air quality standard.*

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

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

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

2.2 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 in accordance with 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.

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 potential/allowable 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. If project-specific impacts are below the SIL, then the project does not have a significant contribution to the specific violations.

2.3 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.

Pollutant	Averaging Period	Significant Impact Levels^a (µg/m³)^b	Regulatory Limit^c (µg/m³)	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 ^d
	Annual	0.3	12 ^k	Mean of maximum 1 st highest ^d
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 µg/m ³)	75 ppb ^p (196 µg/m ³)	Mean of maximum 4 th highest ^d
	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 µg/m ³)	100 ppb ^s (188 µg/m ³)	Mean of maximum 8 th highest ^d
	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	70 ppb ^w	Not typically modeled

- a. Idaho Air Rules Section 006 (definition for significant contribution) or as incorporated by reference as per Idaho Air Rules Section 107.03.b.
- b. Micrograms per cubic meter.
- c. Incorporated into Idaho Air Rules by reference, as per Idaho Air Rules Section 107.
- d. The maximum 1st highest modeled value is always used for the significant impact analysis unless indicated otherwise. Modeled design values are calculated for each ambient air receptor.
- e. Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers.
- f. Not to be exceeded more than once per year on average over 3 years.
- g. Concentration at any modeled receptor when using five years of meteorological data.
- h. Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers.
- i. 3-year mean of the upper 98th percentile of the annual distribution of 24-hour concentrations.
- j. 5-year mean of the 8th highest modeled 24-hour concentrations at the modeled receptor for each year of meteorological data modeled. For the SIL analysis, the 5-year mean of the 1st highest modeled 24-hour impacts at the modeled receptor for each year.
- k. 3-year mean of annual concentration.
- l. 5-year mean of annual averages at the modeled receptor.
- m. Not to be exceeded more than once per year.
- n. Concentration at any modeled receptor.
- o. Interim SIL established by EPA policy memorandum.
- p. 3-year mean of the upper 99th percentile of the annual distribution of maximum daily 1-hour concentrations.
- q. 5-year mean of the 4th highest daily 1-hour maximum modeled concentrations for each year of meteorological data modeled. For the significant impact analysis, the 5-year mean of 1st highest modeled 1-hour impacts for each year is used.
- r. Not to be exceeded in any calendar year.
- s. 3-year mean of the upper 98th percentile of the annual distribution of maximum daily 1-hour concentrations.
- t. 5-year mean of the 8th highest daily 1-hour maximum modeled concentrations for each year of meteorological data modeled. For the significant impact analysis, the 5-year mean of maximum modeled 1-hour impacts for each year is used.
- u. 3-month rolling average.
- v. An annual emissions rate of 40 ton/year of VOCs is considered significant for O₃.
- w. Annual 4th highest daily maximum 8-hour concentration averaged over three years.

Per 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

The submitted modeling report provides a detailed discussion of the methods and data used to demonstrate compliance with applicable standards. The purpose of the application was to issue a facility-wide PTC for existing operations. There are no proposed physical changes to the facility.

3.1 Emission Source Data

Emissions increases of criteria pollutants and TAPs resulting from the proposed modification were estimated by CH2M for various applicable averaging periods.

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

3.1.1 Modeling Applicability and Modeled Criteria Pollutant Emissions Rates

If project-specific emission increases for criteria pollutants would qualify for a below regulatory concern (BRC) permit exemption as per Idaho Air Rules Section 221 if it were not for potential emissions of one or more pollutants exceeding the BRC threshold of 10 percent of emissions defined by Idaho Air Rules as significant, then a NAAQS compliance demonstration may not be required for those pollutants with emissions below BRC levels. DEQ's regulatory interpretation policy of exemption provisions of Idaho Air Rules is that: "A DEQ NAAQS compliance assertion will not be made by the DEQ modeling group for specific criteria pollutants having a project emissions increase below BRC levels, provided the proposed project would have qualified for a Category I Exemption for BRC emissions quantities except for the emissions of another criteria pollutant."¹ The interpretation policy also states that the exemption criteria of uncontrolled potential to emit (PTE) not to exceed 100 ton/year (Idaho Air Rules Section 220.01.a.i) is not applicable when evaluating whether a NAAQS impact 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. The BRC exemption cannot be used to exempt a project from a pollutant-specific NAAQS compliance demonstration in cases where a PTC is required for the action regardless of emissions quantities, such as the modification of an existing emissions or throughput limit.

A NAAQS compliance demonstration must be performed for pollutant increases that would not qualify for the BRC exemption from the requirement to demonstrate compliance with NAAQS. NAAQS compliance demonstrations were not required for this project since the submitted application demonstrated that the project qualified for the BRC NAAQS compliance demonstration exemption.

Site-specific air impact modeling analyses may not be necessary for some pollutants, even where such emissions do not qualify for the BRC exemption. DEQ has developed modeling applicability thresholds, below which a site-specific modeling analysis is not required. DEQ generic air impact modeling analyses

that were used to develop the modeling thresholds provide a conservative SIL analysis for projects with emissions below identified threshold levels. Project-specific modeling applicability thresholds are provided in the *Idaho Air Modeling Guideline*². These thresholds were based on assuring an ambient impact of less than the established SIL for specific pollutants and averaging periods.

If project-specific total emissions rate increases of a pollutant are below Level I Modeling Applicability Thresholds, then project-specific air impact analyses are not necessary for permitting. Use of Level II Modeling Applicability Thresholds are conditional, requiring DEQ approval. DEQ approval is based on dispersion-affecting characteristics of the emissions sources such as stack height, stack gas exit velocity, stack gas temperature, distance from sources to ambient air, presence of elevated terrain, and potential exposure to sensitive public receptors.

Use of Modeling Applicability Thresholds were not used by CH2M since NAAQS compliance demonstrations were not required because total facility-wide emissions were below BRC levels. Table 3 provides a comparison between facility-wide allowable emissions and BRC levels.

Pollutant	Annual Allowable Emissions^a (tons/year)	BRC Level (tons/year)	NAAQS Compliance Demonstration Required
PM _{2.5}	0.7	1.0	No
PM ₁₀	0.7	1.5	No
NO _x	1.0	4	No
CO	0.4	10	No
SO ₂	0.0	4	No
Pb	0.0	0.06	No

^a. As stated in the DEQ Statement of Basis.

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 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 within the context of permitting a new stationary source 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.”

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

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 based on the magnitude of emissions and the short distance from emissions sources to locations where maximum PM₁₀ and PM_{2.5} impacts are anticipated.

3.1.2 Toxic Air Pollutant Emissions Rates

TAP emissions regulations under Idaho Air Rules Section 210 are only applicable to new or modified sources constructed after July 1, 1995.

Table 4 provides a summary of TAP emissions increases for the project for those TAPs that had an increase exceeding the ELs of Idaho Air Rules Section 585 or 586. Table 5 lists source-specific emissions of TAPs used in the impact analyses.

Table 4. TAP EMISSIONS INCREASES THAT TRIGGER MODELING		
Toxic Air Pollutant	Emissions (lb/hr)^a	Screening Emissions Level (lb/hr)
Crystalline Silica ^b	0.0147	0.0067

^a Pounds per hour.

^b Non-carcinogenic TAP. ELs are a daily maximum expressed as pounds/hour. The emissions rate is the daily emissions divided by 24 hours/day.

Table 5. MODELED EMISSIONS RATES FOR TOXIC AIR POLLUTANTS		
Source ID	Source Description	Emissions Rates (pounds/hour)
		Crystalline silica^a
SHOP2	Painting Operations Shop	0.014
SHOP1	Welding Operations	0.00067

^a 24-hour average emissions rate in pounds per hour.

3.1.3 DEQ Review

DEQ determined the following from review of the Air Modeling Analysis Report submitted with the application:

- The appropriate atmospheric dispersion model was used for the proposed project.
- The Gayle facility was properly represented in the model, regarding geographical location, terrain, structures, emission point locations, and areas of potential exposure.

- Appropriate meteorological data were used with the dispersion model.
- Appropriate averaging periods were selected for model output, corresponding to the form of applicable standards.
- The modeling report indicates that all TAPs with project-wide emissions increases above the ELs of Idaho Air Rules Section 585 and 586 were modeled to evaluate compliance with applicable AACs and AACCs.
- Through review of the submitted Air Modeling Analysis Report, it appears that the TAPs air impact analyses were performed using recommended data and methods prescribed in the *Idaho Air Quality Modeling Guideline*¹.

DEQ determined the review of the air impact analyses, as described above, was adequate to provide assurance that the proposed project will not result in increases in ambient air TAP levels that exceeded the specific AACs or AACCs. This conclusion is based on the general type and magnitude of the facility, the types of methods and data used in the analyses, and the modeled results in comparison to applicable AACs/AACCs.

4.0 NAAQS and TAPs Air Impact Modeling Results

4.1 Results for NAAQS Analyses

A NAAQS compliance demonstration was not required for permit issuance because facility-wide emissions of criteria pollutants were below BRC levels.

4.2 Results for TAPs Impact Analyses

Table 6 lists the maximum modeled impacts for specific TAPs. All modeled impacts are below applicable AACs and AACCs.

Table 6. TAP AIR IMPACT ANALYSIS RESULTS			
TAP	Maximum Modeled Impact ($\mu\text{g}/\text{m}^3$)^a	AAC or AACC ($\mu\text{g}/\text{m}^3$)	Percent of AAC/AACC
Crystalline Silica ^b	3.64	5.00	73

^a Micrograms per cubic meter.

^b Non-carcinogenic TAP. Modeled impact and AAC represent a 24-hour averaged concentration.

5.0 Conclusions

The information submitted with the PTC application demonstrated to DEQ's satisfaction that applicable emissions resulting from the proposed modifications at the Gayle facility will not cause or significantly contribute to a violation of any ambient air quality standard or TAP increment.

References

1. *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 August 23, 2017:

Facility Comment: The steel parts coating primers are produced in two colors, gray or red. The MSDS for these materials will be the same. Therefore, we request that the colors be removed from the material names.

DEQ Response: The requested change has been made.

Facility Comment: It is anticipated that the Robovent system will be certified next week. To ensure compliance with condition 2.6, we request the following statement: 'The Robovent system shall be fully operational within 30-days of permit issuance.'

DEQ Response: The requested change has been made.

Facility Comment: For the VOC emission calculation in condition 2.19, we request that the VOC content in pounds per gallon be used, as defined in the MSDS.

DEQ Response: The requested change has been made.

APPENDIX D – PROCESSING FEE

PTC Processing Fee Calculation Worksheet

Instructions:

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

Company: Gayle Manufacturing Company -
Address: 80 N Kings Road
City: Nampa
State: ID
Zip Code: 83687
Facility Contact: Gary Glenn
Title: President
AIRS No.: 027-00158

- 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	1.0	0	1.0
SO ₂	0.0	0	0.0
CO	0.4	0	0.4
PM10	0.7	0	0.7
VOC	3.5	0	3.5
TAPS/HAPS	0.0	0	0.0
Total:	0.0	0	5.7
Fee Due	\$ 2,500.00		

Comments:

