STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502
www.deq.idaho.gov

Governor Brad Little
Director John H. Tippets

March 17, 2020

Kyle Schriver, Operations Manager
Johnson Thermal Systems Inc.
1711 Slipstream Way
Caldwell, ID 83605

RE: Facility ID No. 027-00150, Johnson Thermal Systems Inc., Caldwell
Final Permit Letter

Dear Mr. Schriver:

The Department of Environmental Quality (DEQ) is issuing Permit to Construct (PTC) No. P-2015.0033 Project 62346 to Johnson Thermal Systems Inc. located at Caldwell for the PTC modification to include existing steel fabrication operations. This PTC is issued in accordance with IDAPA 58.01.01.200 through 228 (Rules for the Control of Air Pollution in Idaho) and is based on the certified information provided in your PTC application received December 2, 2019.

This permit is effective immediately and replaces PTC No. P-2015.0033, issued on September 30, 2015. This permit does not release Johnson Thermal Systems Inc. from compliance with all other applicable federal, state, or local laws, regulations, permits, or ordinances.

Pursuant to the Construction and Operation Notification General Provision of your permit, it is required that construction and operation notification be provided. Please provide this information as listed to DEQ's Boise Regional Office, 1445 N. Orchard, Boise, ID 83706, Fax (208) 373-0287.

In order to fully understand the compliance requirements of this permit, DEQ highly recommends that you schedule a permit handoff meeting with David Luft, Air Quality Manager, at (208) 373-0201 to review and discuss the terms and conditions of this permit. Should you choose to schedule this meeting, DEQ recommends that the following representatives attend the meeting: your facility's plant manager, responsible official, environmental contact, and any other staff responsible for day-to-day compliance with permit conditions.

Pursuant to IDAPA 58.01.23, you, as well as any other entity, may have the right to appeal this final agency action within 35 days of the date of this decision. However, prior to filing a petition for a contested case, I encourage you to contact Kelli Wetzel at (208) 373-0502 or kelli.wetzel@deq.idaho.gov to address any questions or concerns you may have with the enclosed permit.

Sincerely,

Mike Simon
Stationary Source Program Manager
Air Quality Division

MS\kw

Permit No. P-2015.0033 PROJ 62346

Air Quality

PERMIT TO CONSTRUCT

Permittee	Johnson Thermal Systems Inc.
Permit Number	P-2015.0033
Project ID	62346
Facility ID	027-00150
Facility Location	1711 Slipstream Way Caldwell, ID 83605

Permit Authority

This permit (a) is issued according to the "Rules for the Control of Air Pollution in Idaho" (Rules), IDAPA 58.01.01.200–228; (b) pertains only to emissions of air contaminants regulated by the State of Idaho and to the sources specifically allowed to be constructed or modified by this permit; (c) has been granted on the basis of design information presented with the application; (d) does not affect the title of the premises upon which the equipment is to be located; (e) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (f) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; and (g) in no manner implies or suggests that the Idaho Department of Environmental Quality (DEQ) or its officers, agents, or employees assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment. Changes in design, equipment, or operations may be considered a modification subject to DEQ review in accordance with IDAPA 58.01.01.200–228.

Date Issued March 17, 2020

Kelli Wetzel

Kelli Wetzel, Permit Writer

Mike Simon, Stationary Source Manager

Contents

1 Permit Scope

Purpose

1.1 This is a modified permit to construct (PTC) to include existing steel fabrication operations at the facility. Although this permit is a modification of a previous permit, the previous permit was for a general automotive coating facility and therefore all permit conditions have been renumbered and modified and will be treated as an initial permit.

1.2 This PTC replaces Permit to Construct No. P-2015.0033, issued on September 30, 2015.

Regulated Sources

Table 1.1 lists all sources of regulated emissions in this permit.

Table 1.1 Regulated Sources

Permit Section	Source	Control Equipment
2	Plasma Cutter: Manufacturer: Hypertherm Model: Plate Pro Extreme 3100 Operation: Dry	Air Filtering System: Manufacturer: CamFill Farr Model: GS125Q PM_{10} control efficiency: 99.97%
3	Welders: Manufacturer: Millermatic Models: 252, PipeWorx 400, Delta Weld 302 Weld Type: GMAW Number of Units: 10	Fully enclosed building
4	Abrasive Blaster: Manufacturer: Clemco Model: 2452	None
5	Painting Spray Gun: Manufacturer: Graco Model: Airpro 288931 Transfer Efficiency: 65% Powder Coating Gun: Manufacturer: Gena Model: OptiFlex 2 Transfer Efficiency: 65%	Paint Booth Manufacturer: Loren Cook Model: TCN-B Type: Down draft Filter: Paint Pockets Company Filter Model: PP Series Filter Type: Dry filters PM_{10} control efficiency: 99.84% Powder Coating Booth Manufacturer: Powder X Model: Unknown Type: Side draft Filter: Northland Filter Int. LLC Filter Model: 1C2430XBED221 Filter Type: Dry filters PM_{10} control efficiency: 99.97%
GP	Unit Heaters: Manufacturer: Modine Model: PDP 3505E0830SAN Max. heat input rating: 0.35 MMBtu /hr Fuel: Natural Gas Number of Units: 2	None

Permit Section	Source	Control Equipment
GP	Shop Floor Heaters: Manufacturer: Prestige Model: SOLO-399 Max. heat input rating: 0.399 MMBtu /hr Fuel: Natural Gas Number of Units: 2	None
	Paint Booth Heater: Manufacturer: Trane Model: GRAA12G Max. heat input rating: 1.2 MMBtu /hr Fuel: Natural Gas Number of Units: 1	None
	Paint Booth Floor Heater: Manufacturer: Prestige Model: SOLO-175 Max. heat input rating: 0.17 MMBtu /hr Fuel: Natural Gas Number of Units: 1	None
	Powder Coating Dry Kiln Heater: Manufacturer: Direct-Fired Power Flame Model: FD150-PB Max. heat input rating: 1.5 MMBtu /hr Fuel: Natural Gas Number of Units: 1	None
	Hand Grinders: Manufacturer: DeWalt Model: 43066	None

2 Plasma Cutting Operations

2.1 Process Description

Johnson Thermal Systems Inc. (JTS) performs only dry plasma cutting operations. Plasma cutting equipment is operated a maximum of 10 hours per day, 5 days per week. All plasma cutting is performed in the shop area and is filtered through CamFill Farr filters with a control efficiency of 99.97% for PM_{10} and $PM_{2.5}$ prior to venting to the atmosphere.

2.2 Control Device Descriptions

Table 2.1 Plasma Cutting Operation Description

Emissions Units / Processes		Control Devices
Plasma Cutter:		Air Filtering System:
Manufacturer:	Hypertherm	Manufacturer: CamFill Farr
Model:	Plate Pro Extreme 3100	Model: GS125Q
Operation:	Dry	PM_{10} control efficiency: 99.97%

Emission Limits

2.3 Emission Limits

The emissions from the plasma cutting operations shall not exceed any corresponding emissions rate limits listed in Table 2.2.

Table 2.2 Plasma Cutting Operation Emission Limits [a]

Source Description	NO_X
	T/yr [b]
Plasma Cutter	1.63

a) In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and record keeping requirements.
b) Tons per any consecutive 12-calendar month period.

2.4 Opacity Limit

Emissions from the plasma cutting operations building stack, or any other stack, vent, or functionally equivalent opening associated with the plasma cutting operations, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

Operating Requirements

2.5 Annual Plasma Cutting Throughput Limit

The plasma cutting operation shall not exceed 2,600 hours per year (hr/yr) per any consecutive 12-month period.

2.6 Material Restriction

Plasma cutting operations shall be conducted only to process steel and stainless steel tubing.

Monitoring and Recordkeeping Requirements

2.7 Plasma Cutter Throughput Recordkeeping

Each calendar month, the permittee shall monitor and record the operating hours of the plasma cutter for the previous month in hours per month (hr/mo). Annual plasma cutter operation shall be determined by summing the monthly operation over the previous consecutive 12-month period to demonstrate compliance with the Annual Plasma Cutting Throughput Limit permit condition.

3 Welding Operations

3.1 Process Description

The facility conducts welding operations in the shop building with a total of ten welders. Welding includes Gas Metal Arc Welding (GMAW) and the welding wire is primarily steel electrode Viking ER70S-6.

3.2 Control Device Descriptions

Table 3.1 Welding Operation Description

Emissions Units / Processes		Control Devices
Welders:		Fully enclosed building
Manufacturer:	Millermatic	
Models:	252, PipeWorx 400, Delta Weld 302	
Weld Type:	GMAW	
Number of Units:	10	

Emission Limits

3.3 Emission Limits

The emissions from the welding operations shall not exceed any corresponding emissions rate limits listed in Table 3.2.

Table 3.2 Welding Operations Emission Limits [a]

Source Description	$PM_{2.5}/PM_{10}$ [b]
	T/yr [c]
Welding Operation	0.0037

a) In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and record keeping requirements.
b) Particulate matter with an aerodynamic diameter less than or equal to a nominal two point five (2.5) and ten (10) micrometers, including condensable particulate as defined in IDAPA 58.01.01.006.
c) Tons per any consecutive 12-calendar month period.

3.4 Opacity Limit

Emissions from the welding operations, or any other stack, vent, or functionally equivalent opening associated with the welding operations, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

Operating Requirements

3.5 Annual Welding Electrode Throughput Limit

The welding operations at this facility are limited to Gas Metal Arc Welding (GMAW). The welding wire is limited to steel electrode Viking ER70S-6 and shall not exceed 1,800 pounds per any consecutive 12-month period.

Monitoring and Recordkeeping Requirements

3.6 Annual Welding Electrode Throughput Monitoring

Each calendar month, the permittee shall monitor and record the usage of steel electrode Viking ER70S-6 for the previous month in pounds per month (lb/mo). Annual electrode usage shall be determined by summing the monthly usage over the previous consecutive 12-month period to demonstrate compliance with the Annual Welding Electrode Throughput Limit permit condition.

4 Abrasive Blasting

4.1 Process Description

The facility uses abrasive blasting to clean and prepare the surface of parts using a CLEMCO 2452 blast machine. The abrasive materials include garnet and white lightning. The white lightning abrasive blasting is performed in the powder coating room and the garnet abrasive blasting is conducted in the Hoop Building which is a three-sided outside blast enclosure.

4.2 Control Device Descriptions

Table 4.1 Abrasive Blasting Operation Description

Emissions Units / Processes	Control Devices
Abrasive Blaster: Manufacturer: Clemco Model: 2452	None

Emission Limits

4.3 Emission Limits

The emissions from the Abrasive Blasting Operations shall not exceed any corresponding emissions rate limits listed in Table 4.2.

Table 4.2 Abrasive Blasting Operation Emission Limits [a]

Source Description	$PM_{2.5}/PM_{10}$ [b]	
	lb/hr [c]	T/yr [d]
Abrasive Blasting Operation	0.12	0.52

a) In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and record keeping requirements.
b) Particulate matter with an aerodynamic diameter less than or equal to a nominal two point five (2.5) and ten (10) micrometers, including condensable particulate as defined in IDAPA 58.01.01.006.
c) Pounds per hour, as determined by a test method prescribed by IDAPA 58.01.01.157, EPA reference test method, continuous emission monitoring system (CEMS) data, or DEQ-approved alternative.
d) Tons per any consecutive 12-calendar month period.

4.4 Opacity Limit

Emissions from the Abrasive Blasting stack, or any other stack, vent, or functionally equivalent opening associated with the Abrasive Blasting Operation, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

Operating Requirements

4.5 Daily Abrasive Blasting Media Throughput Limits

The abrasive blasting media usage shall not exceed 125 pounds per day for white lightning and 4,125 pounds per day for garnet.

4.6 Annual Abrasive Blasting Media Throughput Limits

The total abrasive blasting media usage shall not exceed 13,000 pounds per any consecutive 12-month period for white lightning and 514,800 pounds per any consecutive 12-month period for garnet.

4.7 Abrasive Blasting Media Content

Abrasive blasting media shall consist of only white lightning and garnet.

4.8 Reasonable Control of Fugitive Emissions

All reasonable precautions shall be taken to prevent particulate matter (PM) from becoming airborne, in accordance with IDAPA 58.01.01.650-651. In determining what is reasonable, consideration will be given to factors such as the proximity of dust emitting operations to human habitations and/or activities and atmospheric conditions that might affect the movement of PM.

Monitoring and Recordkeeping Requirements

4.9 Daily Abrasive Blasting Media Throughput Monitoring

The permittee shall monitor and record each day abrasive blasting occurs, in pounds, the amount and type of blasting media used in the abrasive blasting operation to demonstrate compliance with the Daily Abrasive Blasting Media Throughput Limits permit condition.

4.10 Annual Abrasive Blasting Media Throughput Monitoring

Each calendar month, the permittee shall monitor and record the type and usage of each abrasive blasting media for the previous month in pounds per month (lb/mo). Annual abrasive blasting media usage shall be determined by summing the monthly usage over the previous consecutive 12-month period to demonstrate compliance with the Annual Abrasive Blasting Media Throughput Limits permit condition.

5 Coating Operations

5.1 Process Description

Coating operations at the facility include both wet painting and powder coating. Both coating operations are performed using HVLP (high-volume low-pressure) spray guns in enclosed booths with filtration.

5.2 Control Device Descriptions

Table 5.1 Coating Operations Description

Emissions Units / Processes	Control Devices
Painting Spray Gun: Manufacturer: Graco Model: Airpro 288931 Transfer Efficiency: 65% Powder Coating Gun: Manufacturer: Gena Model: OptiFlex 2 Transfer Efficiency: 65%	Paint Booth Manufacturer: Loren Cook Model: TCN-B Type: Down draft Filter: Paint Pockets Company Filter Model: PP Series Filter Type: Dry filters PM_{10} control efficiency: 99.84% Powder Coating Booth Manufacturer: Powder X Model: Unknown Type: Side draft Filter: Northland Filter Int. LLC Filter Model: 1C2430XBED221 Filter Type: Dry filters PM_{10} control efficiency: 99.97%

Emission Limits

5.3 Emission Limits

The emissions from the Coating Operations stacks shall not exceed any corresponding emissions rate limits listed in Table 5.2.

Table 5.2 Coating Operations Emission Limits [a]

Source Description	$PM_{2.5}/PM_{10}$ [b]	VOC
	T/yr [c]	T/yr [c]
Wet Painting	0.017	8.69
Powder Coating	0.004	---

a) In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and record keeping requirements.
b) Particulate matter with an aerodynamic diameter less than or equal to a nominal two point five (2.5) and ten (10) micrometers, including condensable particulate as defined in IDAPA 58.01.01.006.
c) Tons per any consecutive 12-calendar month period.

5.4 Opacity Limit

Emissions from the Coating Operations stacks, or any other stack, vent, or functionally equivalent opening associated with the Coating Operations, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

5.5 Odor Limit

The permittee shall not allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids into the atmosphere of such nature and duration and under such conditions as would be injurious to human health or welfare, to animal or plant life, or to property, or to interfere unreasonably with the enjoyment of life or property in accordance with IDAPA 58.01.01.776.

Operating Requirements

5.6 Approved Annual Coating Usage Limits

The permittee shall not exceed the annual coating usage limits in Table 5.3.

Table 5.3 Approved Coatings Usage Limits

Type of Coating	Coating	Annual Coating Usage Limit (gal/yr) or (lb/yr) [a]
Wet Painting	PPG-Amercoat 450 SG Resin	234
	PPG – Amercoat 450 HAS/HSG Cure	29
	Rustoleum Hi Temp #233967	468
	Sherwin Williams Recoatable Epoxy Primer – B67A5	1,374
	Sherwin Williams Recoatable Hardener – B67V5	1,374
	Sherwin Williams Hi Solids Poly Urethane – B65W300 Series	2,187
	Sherwin Williams Hi Solids Poly Urethane Hardener – B60V30	729
	Sherwin Williams Kem Flash Ultra Bond Primer – E61A705	119
Powder Coating	Sherwin Williams Powdura Hybrid Powder Coating – Low Gloss Texture Black – HBT2-C2621	1,800
	Sherwin Williams Powdura Sher Heat Powder Coating – High Heat Black Texture – SRT2-80006	450
	Sherwin Williams Powdura TGIC Polyester Powder Coating – Gloss White – PWS8-C0016	1,800
	Sherwin Williams Powdura TGIC Polyester Powder Coating – Safety Yellow – PYS8-C0007	720
	Cardinal Polyester TGIC – Powder Coating Semi Gloss Texture Beige – T032-BG03	1,800
	PPG Powder Coating – Silver Vein TGIC Free Polyester – PCTT95100	180,450
	PPG Yellow UD Powder Coating – Cat Yellow – PCF30124	900
	Sherwin Williams Powdura Powder Coating TGIC Polyester – Safety Blue – ELS8-C0002-C50	1,350
	Cardinal Polyester TGIC – Powder Coating Gloss Smooth RAL 7035 Gray – T009-GR230	900
	Sherwin Williams Powdura Powder Coating TGIC Polyester – Gloss Black – PB58-C0000	270

a) Gallons of wet painting per rolling 12-calendar month period or pounds of powder coating per rolling 12-calendar month period.

5.7 Approved Daily Coating Usage Scenario

Unless the permittee is complying with an Alternate Daily Coating Usage Scenario which demonstrates compliance with Coating Emission Limits and Screening Emission Rates, the permittee shall comply with the daily coating usage limits in the following table.

Table 5.4 Approved Daily Coating Usage Scenario

Coating	Daily Usage Limit (gal/day) or (lb/day) [a]
PPG-Amercoat 450 SG Resin	0.75
PPG – Amercoat 450 HAS/HSG Cure	0.09
Rustoleum Hi Temp #233967	4.5
Sherwin Williams Recoatable Epoxy Primer – B67A5	16
Sherwin Williams Recoatable Hardener – B67V5	16
Sherwin Williams Hi Solids Poly Urethane – B65W300 Series	37.5
Sherwin Williams Hi Solids Poly Urethane Hardener – B60V30	6
Sherwin Williams Kem Flash Ultra Bond Primer – E61A705	6
Sherwin Williams Powdura Hybrid Powder Coating – Low Gloss Texture Black – HBT2-C2621	75
Sherwin Williams Powdura Sher Heat Powder Coating – High Heat Black Texture – SRT2-80006	75
Sherwin Williams Powdura TGIC Polyester Powder Coating – Gloss White – PWS8-C0016	75
Sherwin Williams Powdura TGIC Polyester Powder Coating – Safety Yellow – PYS8-C0007	60
Cardinal Polyester TGIC – Powder Coating Semi Gloss Texture Beige – T032-BG03	37.5
PPG Powder Coating – Silver Vein TGIC Free Polyester – PCTT95100	37.5
PPG Yellow UD Powder Coating – Cat Yellow – PCF30124	37.5
Sherwin Williams Powdura Powder Coating TGIC Polyester – Safety Blue – ELS8-C0002-C50	30
Cardinal Polyester TGIC – Powder Coating Gloss Smooth RAL 7035 Gray – T009-GR230	15
Sherwin Williams Powdura Powder Coating TGIC Polyester – Gloss Black – PB58-C0000	15

a) Gallons of wet painting per calendar day or pounds of powder coating per calendar day

5.8 Spray Booth Operation

All coating activities at this facility shall be conducted inside a paint booth or powder coating booth with a functioning filter system in place, exhaust fan(s) operating, and door(s) or curtain(s) closed. During use, the booth must be fully enclosed with a full roof, and four complete walls or complete side curtains, and must be ventilated at negative pressure so that air is drawn into any openings in the booth walls or side curtains.

5.9 Spray Gun Operation

All painting shall be conducted with high-volume low-pressure (HVLP) spray guns or equivalent technology with a minimum 65% transfer efficiency as documented by the spray gun manufacturer.

5.10 Spray Booth Filtration System

The permittee shall install, maintain, and operate, according to the manufacturer's specifications and recommendations, a spray booth filter system for both the paint booth and powder coating booth with a minimum control efficiency of 99% for PM_{10} as documented by the filter manufacturer.

5.11 O&M Manual

Within 60 days of permit issuance the permittee shall have developed a filter system Operation and Maintenance (O&M) Manual for both booths that must include inspection and operation of the filter system including filter replacement criteria. The O&M Manual shall describe the procedures that will be followed to ensure that all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit are at all times (except as provided in the "Rules for the Control of Air Pollution in Idaho") maintained in good working order and operate as efficient as practicable to meet the manufacturer's air pollution control device specifications. This manual shall remain on-site at all times and shall be made available to DEQ representatives upon request.

Alternate Daily Coating Usage Scenarios

5.12 Daily Coating Usage Scenario

Unless using a Daily Coating Usage Scenario for which compliance has previously been determined in the Approved Daily Coating Usage Scenario table (such as when new or reformulated coating materials are introduced), each day before coating materials are used the permittee shall follow the procedures of this section. The permittee shall not use any new Daily Coating Usage Scenario until coating TAP compliance and Coating Emission Limit compliance have been demonstrated for that Scenario according to the procedures below.

5.13 Propose a Daily Coating Usage Scenario

Prior to using or implementing a new Daily Coating Usage Scenario:

- The permittee shall propose and record maximum daily coating usage limits for each coating material that will be used in the Scenario, in gallons per day (gal/day) or in pounds per day (lbs/day). The permittee shall not use or implement any Scenario that does not have recorded maximum daily coating usage limits.
- The permittee shall estimate emissions of $PM_{10}/PM_{2.5}$, VOC, and all TAP listed in the Approved Daily Coating Usage Scenario table for the Scenario (lb/day for each pollutant), using the procedures described below for estimating emissions.
- The permittee shall demonstrate coating TAP compliance for the Scenario, using the procedures described below for demonstrating coating TAP compliance. The permittee shall not use or implement any Scenario that does not demonstrate coating TAP compliance.
- The permittee shall demonstrate Coating Emission Limit compliance for the Scenario, using the procedures described below for demonstrating Coating Emission Limit compliance. The permittee shall not use or implement any Scenario that does not demonstrate Coating Emission Limit compliance.
- The daily coating usage limits and emission estimates used in determining coating TAP compliance and Coating Emission Limit compliance shall be based on estimated emissions from all coatings to be used from all coating operations at the facility (i.e., facility-wide).

5.14 Estimate Coating TAP Emissions

TAP emissions shall be estimated for all TAP listed in the TAP Screening Emissions Rates and Modeled Concentration Limits table:

- Emissions shall be estimated by multiplying each maximum daily coating usage rate (gal/day or lb/day) by the TAP content (lb/gal or lb/lb) of that coating, and summing the total emissions from all coating materials (lb/day). TAP emissions which are designated as a particulate in the Approved Daily Coating Usage Scenario table may also be multiplied by one minus the documented spray gun transfer efficiency and by one minus the documented filtration system control efficiency when control equipment will be applied to such emissions.
- TAP content (lb/gal or lb/lb) of a coating is specified on the Safety Data Sheet (SDS) for that coating, or shall be calculated by multiplying the weight percentage of TAP (%) by the density (lb/gal) of the coating from the SDS.
- For TAP content, if a range is presented on the SDS for a coating, the highest value of the range shall be used when estimating emissions.
- When the TAP content is listed as below detection on SDS or other documentation, the TAP content shall be assumed equal to the coating density divided by 100 (i.e., 1% of density in lb/gal) when estimating emissions.
- When the TAP content cannot be determined from SDS or other documentation, the TAP content shall be assumed equal to the density of the wet coating (lb/gal) or the total weight of the powder coating (lb) when estimating emissions.

5.15 Demonstrate Coating TAP Compliance

For each Daily Coating Usage Scenario, the permittee shall estimate TAP emissions and compare against the TAP Screening Emission Rates or Modeled Concentration Limits in TAP Screening Emissions Rates and Modeled Concentration Limits (see Table 5.5):

- The permittee shall compare estimated TAP emissions for all coatings against the Screening Emission Rates in the TAP Screening Emissions Rates and Modeled Concentration Limits table. For emissions equal or less than the Screening Emission Rate, modeling analyses is not required. For emissions in excess of the Screening Emission Rate, modeling analyses is required to determine the maximum modeled concentration.
- Modeled emissions from all coating operations for a Daily Coating Usage Scenario shall not exceed the Modeled Concentration Limits in the TAP Screening Emissions Rates and Modeled Concentration Limits table. The permittee shall not use or implement any Scenario that exceeds a Modeled Concentration Limit.
- All modeling analyses shall use EPA-approved models and follow relevant guidance in the most recent version of the "State of Idaho Guideline for Performing Air Quality Impact Analyses," available for download at DEQ's website.

Table 5.5 TAP Screening Emission Rates and Modeled Concentration Limits[a]

TAP	CAS	Particulate?	Screening Emission Rate (lb/day) [b]	Modeled Concentration Limit (mg/m^3) [c]
Acetone	67-64-1	No	2856	89
Acetaldehyde	75-07-0	No	0.072	0.00045
Acrylamide	79-06-1	No	0.0001224	0.00000077
Acrylic Acid	79-10-7	No	48	1.5
Aluminum - Metal and Oxide	7429-90-5	Yes	16.008	0.5
Aluminum - Soluble Salts	7429-90-5	Yes	3.192	0.1
n-Amyl Acetate	628-63-7	No	847.2	26.5
Antimony	7440-36-0	Yes	0.792	0.025
Barium	7440-39-3	Yes	0.792	0.025
Benzene	71-43-2	No	0.0192	1.20E-04
Benzo(a)pyrene	50-32-8	No	0.000048	3.0E-07
Benzoyl Peroxide	94-36-0	No	7.992	0.25
Bis (2-Ethylhexyl) Phthalate (DEHP)	117-81-7	No	0.672	0.0042
2-Butoxyethanol (EGBE; Ethylene Glycol Monobutyl Ether)	111-76-2	No	192	6
2-Butoxyethyl Acetate	112-07-2	No	199.92	1.25
n-Butyl Acetate	123-86-4	No	1135.2	35.5
tert-Butyl Acetate	540-88-5	No	1519.2	47.50
n-Butyl Alcohol	71-36-3	No	240	7.5
Sec-Butyl Alcohol (2-Butanol)	78-92-2	No	487.2	15.25
Butyl Hydroxytoluene (2,6-Di-tert-butyl-p-cresol)	128-37-0	No	16.008	0.5
Calcium Carbonate (Limestone)	1317-65-3	Yes	16.008	0.5
Calcium Sulfate (Gypsum)	13397-24-5	Yes	16.008	0.5
Carbon Black	1333-86-4	Yes	5.52	0.175
Carbon Tetrachloride	56-23-5	No	0.01056	0.000067
Chloroform	67-66-3	No	0.00672	0.000043
Chromium	7440-47-3, 16065-83-1	Yes	0.792	0.025
Chromium (VI)	18540-29-9	Yes	0.00001344	8.3E-08
Cobalt	7440-48-4	Yes	0.0792	0.0025
Copper	7440-50-8	Yes	1.608	0.05
Cumene	98-82-8	No	391.2	12.25
Cyclohexane	110-82-7	No	1680	52.5
Cyclohexanone	108-94-1	No	160.08	5
Diacetone Alcohol	123-42-2	No	384	12
Dibutyl Phthalate (DBP)	84-74-2	No	7.992	0.25
1,4-Dichlorobenzene	106-46-7	No	720	22.5
o-Dichlorobenzene	95-50-1	No	480	15
Diethyl Phthalate	84-66-2	No	7.992	0.25
Diisobutyl Ketone	108-83-8	No	232.08	7.25
Dimethylphthalate (DMP)	131-11-3	No	7.992	0.25
Diphenyl (Biphenyl)	92-52-4	No	2.4	0.075
Dipropylene Glycol Methyl Ether	34590-94-8	No	960	30
Ethanolamine (2-Aminoethanol; Monoethanolamine)	141-43-5	No	12.792	0.4
Ethyl Acetate	141-78-6	No	2239.2	70
Ethyl Alcohol	64-17-5	No	3000	94
Ethyl Benzene	100-41-4	No	696	21.75
Ethylene Glycol	107-21-1	No	20.304	6.35
Ethylenediamine (1,2-Diaminoethane)	107-15-3	No	40.08	1.25
Formaldehyde	50-00-0	No	0.01224	7.70E-05
Furfuryl Alcohol	98-00-0	No	64.08	2
Heptane (n-Heptane)	142-82-5	No	2616	82
Hexane (n-Hexane)	110-54-3	No	288	9

Table 5.5 TAP Screening Emission Rates and Modeled Concentration Limits

TAP	CAS	Particulate?	Screening Emission Rate (lb/day) [b]	Modeled Concentration Limit (mg/m^3) [c]
Acetone	67-64-1	No	2856	89
Acetaldehyde	75-07-0	No	0.072	0.00045
Acrylamide	79-06-1	No	0.0001224	0.00000077
Acrylic Acid	79-10-7	No	48	1.5
Aluminum - Metal and Oxide	7429-90-5	Yes	16.008	0.5
Aluminum - Soluble Salts	7429-90-5	Yes	3.192	0.1
n-Amyl Acetate	628-63-7	No	847.2	26.5
Antimony	7440-36-0	Yes	0.792	0.025
Barium	7440-39-3	Yes	0.792	0.025
Benzene	71-43-2	No	0.0192	1.20E-04
Benzo(a)pyrene	50-32-8	No	0.000048	3.0E-07
Benzoyl Peroxide	94-36-0	No	7.992	0.25
Bis (2-Ethylhexyl) Phthalate (DEHP)	117-81-7	No	0.672	0.0042
2-Butoxyethanol (EGBE; Ethylene Glycol Monobutyl Ether)	111-76-2	No	192	6
2-Butoxyethyl Acetate	112-07-2	No	199.92	1.25
n-Butyl Acetate	123-86-4	No	1135.2	35.5
tert-Butyl Acetate	540-88-5	No	1519.2	47.50
n-Butyl Alcohol	71-36-3	No	240	7.5
Sec-Butyl Alcohol (2-Butanol)	78-92-2	No	487.2	15.25
Butyl Hydroxytoluene (2,6-Di-tert-butyl-p-cresol)	128-37-0	No	16.008	0.5
Calcium Carbonate (Limestone)	1317-65-3	Yes	16.008	0.5
Calcium Sulfate (Gypsum)	13397-24-5	Yes	16.008	0.5
Carbon Black	1333-86-4	Yes	5.52	0.175
Carbon Tetrachloride	56-23-5	No	0.01056	0.000067
Chloroform	67-66-3	No	0.00672	0.000043
Chromium	7440-47-3, 16065-83-1	Yes	0.792	0.025
Chromium (VI)	18540-29-9	Yes	0.00001344	8.3E-08
Cobalt	7440-48-4	Yes	0.0792	0.0025
Copper	7440-50-8	Yes	1.608	0.05
Cumene	98-82-8	No	391.2	12.25
Cyclohexane	110-82-7	No	1680	52.5
Cyclohexanone	108-94-1	No	160.08	5
Diacetone Alcohol	123-42-2	No	384	12
Dibutyl Phthalate (DBP)	84-74-2	No	7.992	0.25
1,4-Dichlorobenzene	106-46-7	No	720	22.5
o-Dichlorobenzene	95-50-1	No	480	15
Diethyl Phthalate	84-66-2	No	7.992	0.25
Diisobutyl Ketone	108-83-8	No	232.08	7.25
Dimethylphthalate (DMP)	131-11-3	No	7.992	0.25
Diphenyl (Biphenyl)	92-52-4	No	2.4	0.075
Dipropylene Glycol Methyl Ether	34590-94-8	No	960	30
Ethanolamine (2-Aminoethanol; Monoethanolamine)	141-43-5	No	12.792	0.4
Ethyl Acetate	141-78-6	No	2239.2	70
Ethyl Alcohol	64-17-5	No	3000	94
Ethyl Benzene	100-41-4	No	696	21.75
Ethylene Glycol	107-21-1	No	20.304	6.35
Ethylenediamine (1,2-Diaminoethane)	107-15-3	No	40.08	1.25
Formaldehyde	50-00-0	No	0.01224	7.70E-05
Furfuryl Alcohol	98-00-0	No	64.08	2
Heptane (n-Heptane)	142-82-5	No	2616	82
Hexane (n-Hexane)	110-54-3	No	288	9

TAP	CAS	Particulate?	Screening Emission Rate (lb/day) [b]	Modeled Concentration Limit (mg/m^3) [c]
Hydroquinone	123-31-9	No	3.192	0.1
Iron Oxide (Fe_2O_3)	1309-37-1	Yes	7.992	0.25
Isobutyl Acetate	110-19-0	No	1120.8	35
Isobutyl Alcohol	78-83-1	No	240	6
Isophorone Diisocyanate	4098-71-9	No	0.144	0.0045
Isopropyl Alcohol (Isopropanol)	67-63-0	No	1567.2	49
Isopropyl Acetate	108-21-4	No	1663.2	52
Kaolin	1332-58-7	Yes	3.192	0.1
Lead	7439-92-1	Yes	0.328	0.00015
Manganese	7439-96-5	Yes	7.992	0.25
Magnesite (Magnesium Carbonate)	546-93-0	Yes	16.008	0.5
Methacrylic Acid	79-41-4	No	112.08	3.5
Methanol	67-56-1	No	415.2	13
1-Methoxy-2-Propanol Acetate (PGMEA)	108-65-6	No	576	3.6
2-Methoxyethyl Acetate (EGMEA; Ethylene Glycol Monomethyl Ether Acetate)	110-49-6	No	38.4	1.2
Methyl Acetate	79-20-9	No	976.8	30.5
Methyl n-Amyl Ketone (Heptan-2-one)	110-43-0	No	376.8	11.75
Methyl Chloroform	71-55-6	No	3048	95.5
Methyl Ethyl Ketone (MEK)	78-93-3	No	943.2	29.5
Methyl Isoamyl Ketone	110-12-3	No	384	12
Methyl Isobutyl Carbinol	108-11-2	No	166.32	5.2
Methyl Isobutyl Ketone (MIBK)	108-10-1	No	328.8	10.25
Methyl Methacrylate	80-62-6	No	655.2	20.5
o-Methylcyclohexanone	583-60-8	No	367.2	11.5
Methyl Propyl Ketone (2-Pentanone)	107-87-9	No	1120.8	35
Mica	12001-26-2	Yes	4.8	0.15
Molybdenum	7439-98-7	Yes	7.992	0.25
Naphthalene	91-20-3	No	79.92	2.5
Nickel	7440-02-0	Yes	0.000648	4.20E-06
Nonane	111-84-2	No	1680	52.5
Pentane	109-66-0	No	2832	88.5
Phenol	108-95-2	No	30.48	0.95
Phosphoric Acid	7664-38-2	No	1.608	0.05
Portland Cement	65997-15-1	Yes	16.008	0.5
Propionic Acid	79-09-4	No	48	1.5
n-Propyl Acetate	109-60-4	No	1344	42
Propyl Alcohol	71-23-8	No	799.2	25
Selenium	7782-49-2	Yes	0.312	0.01
Silica – Amorphous, including: • Diatomaceous Earth (uncalcined) • Precipitated Silica • Silica Gel	61790-53-2 112926-00-8	Yes	16.008	0.5
Silica - Crystalline - Cristobalite	14464-46-1	Yes	0.0792	0.0025
Silica - Crystalline Quartz & Fused Silica	14808-60-7	Yes	0.1608	0.005
Sodium Hydroxide (Caustic Soda)	1310-73-2	No	3.192	0.1
Stoddard Solvent	8052-41-3	No	840	26.25
Styrene	100-42-5	No	160.08	1
Tetrachloroethylene (PCE; Perchloroethylene)	127-18-4	No	0.312	0.0021
Tetrahydrofuran	109-99-9	No	943.2	29.5

TAP	CAS	Particulate?	Screening Emission Rate (lb/day) [b]	Modeled Concentration Limit (mg/m^3) [c]
Toluene	108-88-3	No	600	18.75
Trichloroethylene (TCE)	79-01-6	No	0.01224	0.00077
Triethylamine	121-44-8	No	6.48	0.2
Trimethyl Benzene (Mixed and Individual Isomers)	25551-13-7	No	196.8	6.15
2,2,4-Trimethylpentane	540-84-1	No	559.2	17.5
Vinyl Acetate	108-05-4	No	55.2	1.75
Vinyl Chloride	75-01-4	No	0.02256	0.00014
VM&P Naphtha (Petroleum Ether; Ligroin)	8032-32-4	No	2191.2	68.5
Xylene (o-, m-, p-isomers)	1330-20-7	No	696	21.75
Zinc	7440-66-6	Yes	16.008	0.5
Zinc Oxide	1314-13-2	Yes	16.008	0.5
Zirconium	7440-67-7	Yes	7.992	0.25

a) If an alternate coating is introduced and contains an IDAPA 58.01.01.585-586 substance that is not listed in this table, compliance with each screening emission rate and modeled concentration limit in IDAPA 58.01.01.585-586 shall be demonstrated.

b) Worst-case pounds of emissions from all coating operations (combined) per day, as calculated using procedures in this permit to estimate TAP emissions, or as determined by a test method prescribed by IDAPA 58.01.01.157, EPA reference method, or DEQ-approved alternative.

c) Milligrams of toxic air pollutant (TAP) per cubic meter, modeling proposed emission rates calculated using a daily averaging period.

5.16 Demonstrate Coating Emission Limit Compliance

For each Daily Coating Usage Scenario, emissions from all coating operations shall be estimated and compared against the Coating Operation Emission Limits in Table 5.2:

- Annual $PM_{10}/PM_{2.5}$, VOC, and HAP emissions shall be determined by summing daily emissions (lb/day) over the previous consecutive 365-day period and dividing by 2000 pounds per ton (lb/T).
- For solids content, VOC content, and HAP content, if a range is presented on the SDS for a coating, the highest value of the range shall be used when estimating emissions.
- When the solids content, VOC content, or HAP content is listed as below detection on SDS or other documentation, the corresponding content shall be assumed equal to the coating density divided by 100 (i.e., 1% of density in lb/gal) when estimating emissions.
- When the solids content, VOC content, or HAP content cannot be determined from SDS or other documentation, the content shall be assumed equal to the density of the wet coating (lb/gal) or the total weight of the powder coating (lb) when estimating emissions.
- The permittee shall compare estimated emissions for all coating materials against the Coating Operation Emission Limits in Table 5.2. The permittee shall not use or implement any Scenario that exceeds a Coating Operation Emission Limit.

Monitoring, Recordkeeping, and Reporting Requirements

5.17 Coating Usage Scenario Monitoring

Each calendar day on which coating materials are used, the permittee shall select and record the Daily Coating Usage Scenario that will be used for that day, and comply with the maximum daily coating usage limits specified for the selected Scenario.

- Only one Daily Coating Usage Scenario may be used each calendar day.
- The permittee shall not exceed any daily coating usage limit for the Scenario chosen that calendar day.
- The permittee shall maintain documentation such as coating material SDS, manufacturer's specification sheets that support filter control efficiencies, transfer efficiencies, capture efficiencies, and other engineering assumptions relied upon in emission calculations.

5.18 Coating Material Usage Recordkeeping

Each calendar day on which coating materials are used, the permittee shall collect and maintain records of the quantity of each coating material used, including but not limited to primers, stains, basecoats, glazes, sealers, lacquers, thinners, solvents, reducers, caulking, and adhesives to demonstrate compliance with Approved or Alternate Daily Coating Usage Limits.

- If no Alternate Daily Coating Usage Scenarios were used in the calendar day, the daily and annual usage rates shall be compared against the Approved Daily and Annual Coating Usage Limits. Annual usage shall be determined by summing monthly emissions over the previous consecutive 12-month period.
- If Alternate Daily Coating Usage Scenarios were used in the calendar day, emissions from all coatings shall be summed and compared against TAP screening emission rates using the estimation procedures provided in the Estimate Coating TAP Emissions permit condition, and compared against Coating Emission Limits using the estimation procedures provided in the Demonstrate Coating Emission Limit Compliance permit condition.

5.19 Coating Material Purchase and Safety Data Sheet Recordkeeping

For each coating material used at the facility, including but not limited primers, stains, basecoats, glazes, sealers, lacquers, thinners, solvents, reducers, caulking, and adhesives, the permittee shall record and maintain the following records:

- Material purchase records
- Safety Data Sheets (SDS)

5.20 Coating Usage Scenario Reporting

Each year, the permittee shall submit a report by May 1st on all Daily Coating Usage Scenarios used each calendar day during the previous 365-day period. The report shall include documentation supporting the TAP compliance demonstrations and the Coating Emission Limit compliance demonstrations relied upon for each Daily Coating Usage Scenario, and any modeling analyses conducted in each coating TAP compliance demonstration. Documentation should be in sufficient detail, including documentation of all calculations and electronic copies of modeling files, such that DEQ can verify the analysis. The report shall be titled "Permit-Required TAP Compliance Report" and shall be sent to:

DEQ State Office
Air Quality Division
1410 N. Hilton
Boise, ID 83706

5.21 Paint Booth Filter Recordkeeping

The permittee shall maintain documentation, such as manufacturer's specification sheets, that document the required minimum 99% paint booth filter efficiency.

5.22 Spray Gun Recordkeeping

The permittee shall maintain documentation, such as manufacturer's specification sheets, ensuring spray gun transfer efficiencies are 65% or greater.

5.23 Odor Complaints

The permittee shall maintain records of all odor complaints received to demonstrate compliance with Odor Limits. If the complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

6 General Provisions

General Compliance

6.1 The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the "Rules for the Control of Air Pollution in Idaho." The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit, the "Rules for the Control of Air Pollution in Idaho," and the Environmental Protection and Health Act (Idaho Code §39-101, et seq).

[Idaho Code §39-101, et seq.]

6.2 The permittee shall at all times (except as provided in the "Rules for the Control of Air Pollution in Idaho") maintain in good working order and operate as efficiently as practicable all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[IDAPA 58.01.01.211, 5/1/94]

6.3 Nothing in this permit is intended to relieve or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules, and regulations.

[IDAPA 58.01.01.212.01, 5/1/94]

Inspection and Entry

6.4 Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:

- Enter upon the permittee's premises where an emissions source is located, emissions-related activity is conducted, or where records are kept under conditions of this permit;
- Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
- As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108]

Construction and Operation Notification

6.5 This permit shall expire if construction has not begun within two years of its issue date, or if construction is suspended for one year.

[IDAPA 58.01.01.211.02, 5/1/94]

6.6 The permittee shall furnish DEQ written notifications as follows:

- A notification of the date of initiation of construction, within five working days after occurrence; except in the case where pre-permit construction approval has been granted then notification shall be made within five working days after occurrence or within five working days after permit issuance whichever is later;
- A notification of the date of any suspension of construction, if such suspension lasts for one year or more; and

- A notification of the initial date of achieving the maximum production rate, within five working days after occurrence - production rate and date.

[IDAPA 58.01.01.211.01, 5/1/94]

- A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date; and
- A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date.

[IDAPA 58.01.01.211.03, 5/1/94]

Performance Testing

6.7 If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

6.8 All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.

6.9 Within 60 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

[IDAPA 58.01.01.157, 4/5/00 and 4/11/15]

Monitoring and Recordkeeping

6.10 The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Monitoring records shall include, but not be limited to, the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.211, 5/1/94]

Excess Emissions

6.11 The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130–136 for excess emissions due to start-up, shut-down, scheduled maintenance, safety measures, upsets, and breakdowns.

[IDAPA 58.01.01.130–136, 4/5/00]

Certification

6.12 All documents submitted to DEQ—including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification—shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

[IDAPA 58.01.01.123, 5/1/94]

False Statements

6.13 No person shall knowingly make any false statement, representation, or certification in any form, notice, or report required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/98]

Tampering

6.14 No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

Transferability

6.15 This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.

[IDAPA 58.01.01.209.06, 4/11/06]

Severability

6.16 The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[IDAPA 58.01.01.211, 5/1/94]