

Statement of Basis

**Permit to Construct No. P-2020.0007
Project ID 62393**

**CXT Incorporated
Nampa, Idaho**

Facility ID 027-00182

Final

**April 28, 2020
Morrie Lewis
Permit Writer**



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

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

Btu	British thermal units
BRC	below regulatory concern for criteria pollutants as provided in IDAPA 58.01.01.221.01
CAA	Clean Air Act
CAS No.	Chemical Abstracts Service registry number
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
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
lb/hr	pounds per hour
MACT	Maximum Achievable Control Technology
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
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
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
scf	standard cubic feet
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
T/yr	tons per consecutive 365-calendar-day period
TAP	toxic air pollutants
U.S.C.	United States Code
VOC	volatile organic compounds

FACILITY INFORMATION

Description

The concrete products fabrication process includes the following steps:

- Ready-mix concrete is placed into steel forms to create structures. The ready-mix concrete truck is connected to a vehicle exhaust system to remove exhaust from the building during this activity.
- Steel forms are coated with an oil release agent. Concrete is placed in the forms and allowed to cure.
- The steel forms may cure on heated coils, dependent upon the ambient temperature. The coils are heated by a natural gas boiler.
- Metal items are attached to the structures. Some metal items will be cast in place with concrete, and some will be attached after concrete has cured.
- The structures are coated in the paint booth (concrete and metal).
- Rubber templates are created for creating texture on the concrete panels.
- Structures are prepared for shipment with wood forms. Some structures may require interior wood framing.

Permitting History

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

Application Scope

This permit is the initial PTC for this facility.

The applicant has proposed to install and operate equipment to conduct the following operations:

- Moldmaking operations: Polytek Liquid Rubber Part A and B are used to create rubber templates, which do not contain toxic air pollutant (TAP) substances regulated by IDAPA 58.01.01.585-586.
- Curing operations: One natural gas boiler will be located at the facility. Two vehicle exhaust systems will be located in the facility. Steel forms are coated with a form oil release agent.
- Welding operations: Welding will be performed using hand-held welding torches. Although not required, particulate matter (PM) emissions may be controlled by a fume extraction system when practical to do so. Grinding operations are also associated with the finishing of welding seams, using handheld equipment such as angle grinders.
- Coating operations: Coating will be performed in two paint booths using high-efficiency high-volume/low-pressure (HVLP) spray guns.
- Natural gas heating: Two natural gas heating units will be located at the facility for each paint booth. Three natural gas heating units will be located at the facility to provide heat for the office area.
- Metal cutting operations: A cutter will be fitted with a self-contained dust collector for PM collection.
- Wood cutting operations: Bench-top table saws have a dust collector for PM collection.

Application Chronology

February 19, 2020	DEQ received an application.
February 20, 2020	DEQ received an application fee.
February 25 – March 11, 2020	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.

March 20, 2020 DEQ determined that the application was complete.

April 7, 2020 DEQ made available the draft permit and statement of basis for peer and regional office review.

April 10, 2020 DEQ made available the draft permit and statement of basis for applicant review.

April 24, 2020 DEQ received the permit processing fee.

April 28, 2020 DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION

Source Descriptions	Control Equipment
<u>Curing</u> Form Release Agent: Dayton Clean Strip Ultra J3 Maximum Operation: 5.0 gal/day and 500 gal/yr, or as limited by Alternate Daily Curing, Moldmaking, and Coating Usage Scenario	<u>None</u>
<u>Moldmaking</u> Mold Rubber Components: Polytek Liquid Rubber Parts A & B – Poly 74-Series and Poly 75-Series Maximum Operation: Unlimited use of Poly 74-Series and Poly 75-Series, or as limited by Alternate Daily Curing, Moldmaking, and Coating Usage Scenario	<u>None</u>
<u>Ready-Mix Concrete Trucks</u>	<u>Vehicle Exhaust Systems (HR-1 and HR-2)</u> Manufacturer: Car-Mon Model: TSR-P exhaust hose and DXi exhaust fan
<u>Spray Guns</u> Manufacturer/Model: Wagner GM-4700AC, Graco AirPro HVLP Transfer Efficiency: 65% Maximum Operation: 150 gal/day and 20,000 gal/yr for all water-based coatings (combined), 25 gal/day and 3,000 gal/yr for all non-water-based coatings (combined), and 2.5 gal/day and 780 gal/yr for all preparation/cleaning coatings (combined); or as limited by Alternate Daily Curing, Moldmaking, and Coating Usage Scenario	<u>Large Spray Booth and Filtration System (PB-1)</u> Manufacturer: Spray Systems Model: TB-492018 Filter: Air Handler Filter Model: 2W002 Control Efficiency: 98% <u>Small Spray Booth and Filtration System (PB-2)</u> Manufacturer: Standard Tool & Equipment Model Model: BECF-1000 Filter: Air Handler Filter Model: 2W001 Control Efficiency: 98%

Source Descriptions	Control Equipment
<p><u>GMAW and FCAW welders (including W-1 through W-7)</u> Welding Material: E70S and E308 Maximum Operation: 6,000 lb/yr GMAW 1,000 lb/yr FCAW</p>	<p><u>None</u> Control equipment is not required for welding activities, but a fume extraction system similar to that described below may be used whenever practical</p> <p><u>Mobile Fume Extraction System</u> Manufacturer: Miller Filtair Model: MWX Filter: Merv 15-16 rating Control Efficiency: 90%</p>
<p>Grinders (handheld)</p>	<p><u>None</u></p>
<p><u>Band Saw (MC-1)</u> Manufacturer: Hydmech Model: M16A Maximum Operation: 1,872 hr/yr</p>	<p><u>Dust Collector (DC-MC-1)</u> Manufacturer: unknown Model: unknown Filter: unknown Control Efficiency: 90%</p>
<p><u>Table Saws (WC-1 and WC-2)</u> Manufacturer: Dewalt Model: DW746 10"</p>	<p><u>Dust Collector (DC-WC-1 and DC-WC-2)</u> Manufacturer: JET Model: DC-500P Filter: 5μ cloth Control Efficiency: 99%</p>
<p><u>Boiler (B-1)</u> Manufacturer: Fulton Alliance Horizontal Coil Design Thermal Fluid Heater Model: FT-0240HC Maximum Capacity: 2.4 MMBtu/hr Maximum Operation: 29,000,000 scf/yr for all units facility-wide (combined) (approximately 3,744 hr/yr) Fuel: natural gas</p>	<p><u>None</u></p>
<p><u>Large Spray Booth Heater (MAU-PB-1)</u> Manufacturer: Bessamaire Model: MUAJH-40TMF-631 Maximum Capacity: 4.3 MMBtu/hr Maximum Operation: 29,000,000 scf/yr for all units facility-wide (combined) Fuel: natural gas</p>	<p><u>None</u></p>
<p><u>Small Spray Booth Heater (MAU-PB-2)</u> Manufacturer: Airrite Model: ARTT118 Maximum Capacity: 0.758 MMBtu/hr Maximum Operation: 29,000,000 scf/yr for all units facility-wide (combined) Fuel: natural gas</p>	<p><u>None</u></p>

Source Descriptions	Control Equipment
<u>Office Heater #1 (F-1)</u> Manufacturer: Carrier Model: 58SC090E21-20 Maximum Capacity: 0.088 MMBtu/hr Maximum Operation: 29,000,000 scf/yr for all units facility-wide (combined) Fuel: natural gas	<u>None</u>
<u>Office Heater #2 (F-2)</u> Manufacturer: Carrier Model: 58SC090E21-20 Maximum Capacity: 0.088 MMBtu/hr Maximum Operation: 29,000,000 scf/yr for all units facility-wide (combined) Fuel: natural gas	<u>None</u>
<u>Office Heater #3 (F-3)</u> Manufacturer: Carrier Model: 59SP5 080-20 Maximum Capacity: 0.080 MMBtu/hr Maximum Operation: 29,000,000 scf/yr for all units facility-wide (combined) Fuel: natural gas	<u>None</u>

Emission 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, emission inventories were developed for the curing, welding, coating, metal cutting, wood cutting, grinding, and heating operations at the facility (see Appendix A). Emissions estimates of criteria pollutant, HAP, and TAP PTE were based on emission factors from AP-42, operation of 3,744 hr/yr or less for each spray booth and the curing boiler, operation of 1,872 hr/yr for metal cutting, coating usage rates by type as limited in the permit, safety data sheet material content, operation of 6,000 lb/yr or less for welding, wood throughput of 10 million ft³/yr, control equipment specifications, and process information specific to the facility.

Uncontrolled PTE

Using the definition of PTE, uncontrolled PTE 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 PTE is used to determine if a facility is a “synthetic minor” source of emissions. Synthetic minor sources are facilities that have an uncontrolled PTE for regulated air pollutants or HAP above an applicable major source threshold without permit limits.

The following table presents the uncontrolled PTE 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.

Uncontrolled PTE was based upon continuous operation of each spray booth heater and the curing boiler, operation of 1,872 hr/yr for metal cutting, coating usage rates by type as limited in the permit, safety data sheet material content, operation of 6,000 lb/yr or less for welding, wood throughput of 10 million ft³/yr, control equipment specifications, and process information specific to the facility.

Table 2 UNCONTROLLED PTE FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC	HAP
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Curing	110.24	0.01	2.21	1.33	137.07	421.18
Coating	441.73	0.00	0.00	0.00	900.53	
Welding	0.02	0.00	0.00	0.00	0.00	
Metal cutting	0.09	0.00	0.00	0.00	0.00	
Wood cutting	2.05	0.00	0.00	0.00	0.00	
Heating	0.18	0.01	3.96	0.56	0.13	
Total, Point Sources	554.31	0.02	6.17	1.89	1037.73	421.18

Controlled PTE

Controlled PTE 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 were set to zero for all criteria pollutants.

The following table presents the controlled PTE 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. Controlled PTE was based on the same assumptions as uncontrolled PTE, but also accounts for the use of control equipment, including the spray booth filtration, fume extraction, and dust collection systems. In addition, controlled PTE also accounts for the operational flexibility to use alternate curing, moldmaking, and coating usage scenarios which comply with permit emission limits.

Table 3 CONTROLLED PTE FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC	Lead	HAP
	T/yr ^(a)	T/yr ^(a)	T/yr ^(a)	T/yr ^(a)	T/yr ^(a)	T/yr ^(a)	T/yr ^(a)
Curing & Coating	0.70 ^(b)	0.00	1.61	0.83	19.7 ^(b)	2.3E-06	18.9 ^(b)
Welding and Grinding (fugitive)	0.004						0.02
Welding	0.004						
Metal cutting	0.01						0.01
Wood cutting	0.02						
Heating	0.08	0.01	1.80	0.26	0.06	3.0E-05	0.01
Facility-Wide Total	< 0.82	< 0.01	< 3.41	< 1.09	19.76	< 3.3E-05	18.94^(b)
BRC thresholds^(c)	1.0	4.0	4.0	10.0	4.0	0.06	

- a) Controlled average emission rate in tons per consecutive 365-day period is an annual average, based on the proposed annual operating schedule and annual limits.
- b) PM₁₀/PM_{2.5}, VOC, and total HAP emissions from all curing, coating, and moldmaking operations combined are limited by Permit Condition 2.3 to allow for operational flexibility.
- c) Potential emission rates are considered “below regulatory concern” (BRC) for criteria pollutants when less than 10% of significant emission rates as defined in IDAPA 58.01.01.006.

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 4 CHANGES IN PTE FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC	Lead	HAP
	T/yr ^(a)	T/yr ^(a)	T/yr ^(a)	T/yr ^(a)	T/yr ^(a)	T/yr ^(a)	T/yr ^(a)
Pre-Project PTE	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Post-Project PTE	0.82	0.01	3.41	1.09	19.76	3.3E-05	18.9
Changes in PTE	0.82	0.01	3.41	1.09	19.8	7.1E-06	18.9

a) Tons per consecutive 365-day period.

With the exception of volatile organic compounds (VOC), facility-wide emission rates of criteria pollutants (PM_{2.5}, PM₁₀, SO₂, NO_x, CO, and Pb) were below the “below regulatory concern” (BRC) threshold levels of less than 10% of “significant” emission rates defined in IDAPA 58.01.01.006.

Non-Carcinogenic TAP Emissions

A summary of the estimated emission increases of non-carcinogenic TAP is provided in the following table.

**Table 5 EMISSION INCREASES OF NON-CARCINOGENIC TAP
(APPROVED OPERATING SCENARIO)**

Non-Carcinogenic Toxic Air Pollutants	24-hour Average Emissions Rates for Units at the Facility	Non-Carcinogenic Screening Emission Level
	(lb/hr)	(lb/hr)
Naphthalene	2.10E-06	3.33E+00
Hexane	6.86E-03	1.20E+01
Toluene	1.01E-01	2.50E+01
Pentane	9.91E-03	1.18E+02
Manganese	2.06E-03	6.70E-02
Barium	1.68E-05	3.30E-02
Selenium	9.15E-08	1.30E-02
Zinc	3.50E-04	6.67E-01
Cumene	1.30E-01	1.63E+01
Ethyl Benzene	1.05E+00	2.90E+01
Kaolin	4.81E-02	1.33E-01
Silica Amorphous	2.03E-02	6.67E-01
2-Butoxyethanol	2.84E-01	8.00E+00
n-Butyl Acetate	9.02E-01	4.73E+01
Calcium Carbonate	1.67E-02	6.67E-01
Carbon Black	0.00E+00	2.30E-01
Isopropyl Alcohol	1.95E-01	6.53E+01
Methyl n-Amyl Ketone	1.83E+00	1.57E+01
Methyl Isobutyl Ketone	9.48E-02	1.37E+01
Nonane	4.13E-01	7.00E+01
Silica Crystalline Quartz	7.30E-04	6.70E-03
Stoddard Solvent Mineral Spirits	1.01E+00	3.50E+01
Xylene	4.95E+00	2.90E+01
Dipropylene Glycol Methyl Ether	1.11E-02	4.00E+01
Methyl Methacrylate	1.09E-02	2.73E+01
Silicon Tetrahydride	4.22E-01	4.67E-01
Vinyl Toluene	2.78E-02	1.60E+01
Zinc Oxide	0.00E+00	3.33E-01
Chromium	2.08E-05	3.30E-02
Cobalt	6.35E-06	3.30E-03

All proposed emission increases of non-carcinogenic TAP were below screening emission levels (EL) for the approved operating scenario as proposed by the applicant (i.e., assuming the approved curing, coating, and moldmaking usage scenario, as described in Permit Conditions 2.9 through 2.12). All emission increases of non-carcinogenic TAP for all alternate curing, moldmaking, and coating usage scenarios are limited to below non-carcinogenic TAP EL. Therefore, modeling was not required for any non-carcinogenic TAP, because none of the 24-hour average non-carcinogenic TAP EL identified in IDAPA 58.01.01.585 were exceeded.

Carcinogenic TAP Emissions

A summary of the estimated emission increases of carcinogenic TAP is provided in the following table.

**Table 6 EMISSION INCREASES OF CARCINOGENIC TAP
(APPROVED OPERATING SCENARIO)**

Carcinogenic Toxic Air Pollutants	Annual Average Emissions Rates for Units at the Facility	Carcinogenic Screening Emission Level
	(lb/hr)	(lb/hr)
3-Methylchloranthrene	< 6.20E-09	3.00E-06
Benzo(a)pyrene	< 4.13E-09	2.00E-06
Benzene	< 7.23E-06	8.00E-04
Formaldehyde	< 2.58E-04	5.10E-04
Arsenic	< 6.89E-07	2.00E-06
Beryllium	< 4.13E-08	2.80E-05
Cadmium	< 3.65E-06	3.70E-06
Nickel	< 2.56E-05	2.70E-05
Hexavalent Chromium	< 5.28E-07	5.60E-07

All proposed emission increases of carcinogenic TAP were below screening emission levels (EL) for the approved operating scenario as proposed by the applicant (i.e., assuming the approved curing, coating, and moldmaking usage scenario, as described in Permit Conditions). All emission increases of carcinogenic TAP for all alternate curing, moldmaking, and coating usage scenarios are limited to below non-carcinogenic TAP EL. Therefore, modeling was not required for any non-carcinogenic TAP, because none of the 24-hour average non-carcinogenic TAP EL identified in IDAPA 58.01.01.585 were exceeded.

Post-Project HAP Emissions

Facility-wide HAP emissions were estimated at below 9 tons per consecutive 365-day period (T/yr) as proposed by the applicant (i.e., assuming the approved curing, coating, and moldmaking usage scenario, as described in Permit Conditions). For process flexibility, emission limits were established based on potential alternate curing, moldmaking, and coating usage scenarios evaluated in the application and in the automotive coating general permit emission inventories, while observing HAP TAP EL and SM80 facility classification. Individual HAP was limited to 8 T/yr and total HAP was limited to 18.9 T/yr.

Ambient Air Quality Impact Analyses

A preconstruction modeling demonstration was not required. As presented in the Emission Inventories section, facility-wide emission rates of criteria pollutants (PM_{2.5}, PM₁₀, SO₂, NO_x, CO, and Pb) were below the “below regulatory concern” (BRC) threshold levels of less than 10% of “significant” emission rates defined in IDAPA 58.01.01.006.¹ Emission rates of TAP were below applicable EL in IDAPA 58.01.01.585-586.

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).

¹ Criteria pollutant BRC thresholds as provided in IDAPA 58.01.01.221.01, and DEQ guidance pertaining to BRC (2009ACF12).

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 HAP only:

- A = Use when any one HAP has permitted emissions > 10 T/yr or if the aggregate of all HAP (Total HAP) has permitted emissions > 25 T/yr.
- SM80 = Use if a synthetic minor (uncontrolled HAP emissions are > 10 T/yr or if the aggregate of all uncontrolled HAP (Total HAP) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits > 8 T/yr of a single HAP or ≥ 20 T/yr of Total HAP.
- SM = Use if a synthetic minor (uncontrolled HAP emissions are > 10 T/yr or if the aggregate of all uncontrolled HAP (Total HAP) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits < 8 T/yr of a single HAP and/or < 20 T/yr of Total HAP.
- B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 10 and 25 T/yr HAP major source thresholds.
- UNK = Class is unknown.

For all other pollutants:

- A = Use when permitted emissions of a pollutant are > 100 T/yr.
- SM80 = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are ≥ 80 T/yr.
- SM = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are < 80 T/yr.
- B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 100 T/yr major source threshold.
- UNK = Class is unknown.

Table 7 REGULATED AIR POLLUTANT FACILITY CLASSIFICATION

Pollutant	Uncontrolled PTE (T/yr)	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM	554.31	0.82	100	SM
PM ₁₀	554.31	0.82	100	SM
PM _{2.5}	554.31	0.82	100	SM
SO ₂	0.02	0.01	100	B
NO _x	6.17	3.41	100	B
CO	1.89	1.09	100	B
VOC	1037.73	19.76	100	SM
HAP (single)	> 10	7.9	10	SM
Total HAPs	421.18	18.9	25	SM

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 concrete products fabrication. 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.

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 criteria pollutants (i.e., PM, SO₂, NO_x, CO, VOC, and lead) or 10 tons per year for any one HAP or 25 tons per year for all HAP combined as demonstrated previously in the Emission Inventories section. 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 were not applicable to this permitting action.

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 were 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 in 40 CFR Part 60.

NESHAP Applicability (40 CFR 61)

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

MACT/GACT Applicability (40 CFR 63)

The facility is not subject to any MACT standards in 40 CFR Part 63. The boiler is gas-fired (Permit Condition 4.5), and is therefore not subject to 40 CFR 63, Subpart JJJJJJ – NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources (NESHAP JJJJJJ). The facility has proposed to operate as a minor source of HAP emissions.

40 CFR 63, Subpart JJJJJJ *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*

40 CFR 63.11193.....*Am I subject to this subpart?*

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler as defined in §63.11237 that is located at, or is part of, an area source of hazardous air pollutants (HAP), as defined in §63.2, except as specified in §63.11195.

...

40 CFR 63.11195.....Are any boilers not subject to this subpart?

The types of boilers listed in paragraphs (a) through (k) of this section are not subject to this subpart and to any requirements in this subpart.

(a) Any boiler specifically listed as, or included in the definition of, an affected source in another standard(s) under this part.

...

(d) A boiler that is used specifically for research and development. This exemption does not include boilers that solely or primarily provide steam (or heat) to a process or for heating at a research and development facility. This exemption does not prohibit the use of the steam (or heat) generated from the boiler during research and development, however, the boiler must be concurrently and primarily engaged in research and development for the exemption to apply.

...

(e) A gas-fired boiler as defined in this subpart.

(f) A hot water heater as defined in this subpart.

...

(h) Temporary boilers as defined in this subpart.

(i) Residential boilers as defined in this subpart.

(j) Electric boilers as defined in this subpart.

...

40 CFR 63.11237.....What definitions apply to this subpart?

...

Boiler means an enclosed device using controlled flame combustion in which water is heated to recover thermal energy in the form of steam and/or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in §241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers, process heaters, and autoclaves are excluded from the definition of Boiler.

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Commercial boiler means a boiler used in commercial establishments such as hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

...

Electric boiler means a boiler in which electric heating serves as the source of heat. Electric boilers that burn gaseous or liquid fuel during periods of electrical power curtailment or failure are included in this definition.

...

Gaseous fuels includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, hydrogen, and biogas.

Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

Heat input means heat derived from combustion of fuel in a boiler and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns.

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass fuel and hot water is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 million Btu per hour heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on-demand hot water.

Hourly average means the arithmetic average of at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

Institutional boiler means a boiler used in institutional establishments such as, but not limited to, medical centers, nursing homes, research centers, institutions of higher education, elementary and secondary schools, libraries, religious establishments, and governmental buildings to provide electricity, steam, and/or hot water...

...

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions (i.e., a temperature of 288 Kelvin, a relative humidity of 60 percent, and a pressure of 101.3 kilopascals). Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane-derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C₃H₈.

...

Process heater means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. Process heaters include units that heat water/water mixtures for pool heating, sidewalk heating, cooling tower water heating, power washing, or oil heating.

...

Residential boiler means a boiler used to provide heat and/or hot water and/or as part of a residential combined heat and power system. This definition includes boilers located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm) used primarily to provide heat and/or hot water for:

(1) A dwelling containing four or fewer families, or

(2) A single unit residence dwelling that has since been converted or subdivided into condominiums or apartments.

...

Temporary boiler means any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler that replaces a temporary boiler at a location within the facility and performs the same or similar function will be included in calculating the consecutive time period unless there is a gap in operation of 12 months or more.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

...

The boiler is gas-fired (Permit Condition 4.5), and is therefore not subject to this subpart.

Permit Conditions Review

This section describes the permit conditions for this initial permit or only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

Permit Condition 1.1 establishes the scope of this permitting action.

Permit Condition 1.2 describes the emission sources and activities regulated by this permit.

Permit Conditions 2.1 and 2.2 describe the curing, moldmaking, and coating processes and the control devices associated with these processes. BRC is ensured assuming use of the specified control equipment, with the exception welding activities which may be uncontrolled.

Permit Condition 2.3 establishes emission limits for the curing, moldmaking, and coating processes to ensure that emissions remain below regulatory concern (BRC). With the exception of VOC, criteria pollutant emission estimates used in development of the emission inventories were limited BRC to avoid requirements for preconstruction modeling demonstrations. Emission limits for all criteria pollutants (including VOC) were based on the proposed material usage rates for curing and coating materials, and the application methods and control equipment (specified in Table 1). Compliance is ensured by complying with curing and coating process operating requirements for control equipment (Permit Conditions 2.6 and 2.8) and either approved or alternate daily material usage limits (Permit Conditions 2.9 through 2.12, or Permit Conditions 2.13 through 2.16).

Permit Conditions 2.4 and 2.17 incorporate odor emission limits in accordance with IDAPA 58.01.01.776. Compliance is ensured by use of control equipment at all times during operation (Permit Conditions 2.6 through 2.8), and monitoring and responding to odor complaints (Permit Condition 2.17).

Permit Conditions 2.5, 3.3, 3.9, and 4.4 incorporate opacity limits for the curing, moldmaking, coating, welding, metal cutting, wood cutting, and heating processes in accordance with IDAPA 58.01.01.625. Compliance is ensured by use of control equipment at all times during operation (Permit Conditions 2.6 through 2.8), and monthly facility-wide inspection (Permit Condition 3.9).

Permit Conditions 2.6 through 2.8 require operation of control equipment at all times coating activities are conducted and at all times vehicles are operated within the building. Emission estimates used in development of the emission inventories are limited BRC assuming that HVLP spray guns achieve 65% transfer of coating materials, and that filtration control equipment captures and achieves 98 control of PM emissions from coating operations.

Permit Conditions 2.9 through 2.12 limit daily material usage for curing and coating materials as proposed by the applicant. Emission estimates used in development of the emission inventories are limited BRC assuming the specified usage rates, curing and coating materials, and application methods. Moldmaking materials as proposed by the applicant did not contain TAP or VOC, thus there was no limit established for usage of Poly-74 and Poly-75 series approved moldmaking materials. Use of any other moldmaking materials requires compliance with requirements for alternate curing, moldmaking, and coating usage scenarios. (Although not proposed for use, Poly-81 series does contain regulated TAP).

Permit Conditions 2.13 through 2.16 allow optional alternate daily material usage limits when using alternate or reformulated curing, moldmaking, and coating materials, to be used in lieu of the approved material usage limits (Permit Conditions 2.9 through 2.12). Emission estimates used in development of the emission inventories were limited consistent with established emission limits (Permit Condition 2.3) and below screening emission rates (TAP EL) as specified in IDAPA 58.01.01.585-586. Alternate emission inventories were developed which accounted for a range of potential coatings, including those considered in the development of the automotive coating general permit and also those proposed in the application.

Permit Conditions 2.18 through 2.21 require monitoring, recordkeeping, and reporting of material usage and scenarios implemented, material purchase records, safety data sheets (SDS), and excess emission events to ensure compliance with approved and alternate material usage limits (Permit Conditions 2.9 through 2.16).

Permit Conditions 3.1 and 3.2 describe the welding, metal cutting, and wood cutting processes and the control devices associated with these processes. Although not required, filtration will be used during welding activities when practical.

Permit Conditions 3.4, 3.9, and 3.10 incorporate fugitive dust emission limits in accordance with IDAPA 58.01.01.650-651. All cutting operations were described as being conducted inside the building, such that fugitive emissions are not expected. Compliance with this limit is ensured by facility-wide inspection (, and monthly facility-wide inspection (Permit Condition 3.9), and responding as appropriate to any complaints received (Permit Condition 3.10).

Permit Condition 3.5 requires operation of control equipment at all times welding, metal cutting, and wood cutting are conducted. Emission estimates used in development of the emission inventories are limited BRC assuming that filtration control equipment captures and achieves 90% control of PM emissions from welding and metal cutting operations, and 99% control of PM emissions from wood cutting operations.

Permit Conditions 3.6 and 3.11 limit welding material usage. Emission estimates used in development of the emission inventories are limited BRC assuming the specified welding electrode types and usage rates.

Permit Conditions 3.7 and 3.12 limit metal cutting annual hours of operation. Emission estimates used in development of the emission inventories are limited BRC assuming the specified hours of operation.

Permit Conditions 4.1 and 4.2 describe the process heating and associated control devices.

Permit Condition 4.3 incorporates PM emission limits from fuel-burning equipment as defined in IDAPA 58.01.01.006, in accordance with IDAPA 58.01.01.676. Compliance with this limit is ensured by complying with combustion of natural gas only (Permit Condition 4.5).

Permit Conditions 4.5 and 4.6 limit natural gas usage. Emission estimates used in development of the emission inventories are limited BRC assuming the specified fuel usage rates as proposed by the applicant. Compliance with this limit is ensured by monthly monitoring natural gas usage (Permit Condition 4.6), either facility-wide or for each emission source specified.

Permit Condition 5.1 is the duty to comply general compliance provision, which requires that the permittee comply with all of the permit terms and conditions pursuant to Idaho Code §39-101.

Permit Condition 5.2 is the maintenance and operation general compliance provision, which requires that the permittee maintain and operate all treatment and control facilities at the facility in accordance with IDAPA 58.01.01.211.

Permit Condition 5.3 is the obligation to comply general compliance provision, which specifies that no permit condition is intended to relieve or exempt the permittee from compliance with applicable state and federal requirements, in accordance with IDAPA 58.01.01.212.01.

Permit Condition 5.4 is the inspection and entry provision, which requires that the permittee allow DEQ inspection and entry pursuant to Idaho Code §39-108.

Permit Condition 5.5 is the permit expiration construction and operation provision, which specifies that the permit expires if construction has not begun within two years of permit issuance or if construction has been suspended for a year in accordance with IDAPA 58.01.01.211.02.

Permit Condition 5.6 is the notification of construction and operation provision, which requires that the permittee notify DEQ of the dates of construction and operation, in accordance with IDAPA 58.01.01.211.01 and 211.03.

Permit Condition 5.7 is the performance testing notification of intent provision, which requires that the permittee notify DEQ at least 15 days prior to any performance test to provide DEQ the option to have an observer present, in accordance with IDAPA 58.01.01.157.03.

Permit Condition 5.8 is the performance test protocol provision, which requires that any performance testing be conducted in accordance with the procedures of IDAPA 58.01.01.157, and encourages the permittee to submit a protocol to DEQ for approval prior to testing.

Permit Condition 5.9 is the performance test report provision, which requires that the permittee report any performance test results to DEQ within 60 days of completion, in accordance with IDAPA 58.01.01.157.04-05.

Permit Condition 5.10 is the monitoring and recordkeeping provision, which requires that the permittee maintain sufficient records to ensure compliance with permit conditions, in accordance with IDAPA 58.01.01.211.

Permit Condition 5.11 is the excess emissions provision, which requires that the permittee follow the procedures required for excess emissions events, in accordance with IDAPA 58.01.01.130-136.

Permit Condition 5.12 is the certification provision, which requires that a responsible official certify all documents submitted to DEQ, in accordance with IDAPA 58.01.01.123.

Permit Condition 5.13 is the false statement provision, which requires that no person make false statements, representations, or certifications, in accordance with IDAPA 58.01.01.125.

Permit Condition 5.14 is the tampering provision, which requires that no person render inaccurate any required monitoring device or method, in accordance with IDAPA 58.01.01.126.

Permit Condition 5.15 is the transferability provision, which specifies that this permit to construct is transferable, in accordance with the procedures of IDAPA 58.01.01.209.06.

Permit Condition 5.16 is the severability provision, which specifies that permit conditions are severable, in accordance with IDAPA 58.01.01.211.

PUBLIC REVIEW

Public Comment Opportunity

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

APPENDIX A – EMISSION INVENTORIES



6701 E. Flamingo Ave.
Building 300
Nampa, Idaho 83687

6.3 Uncontrolled Potential to Emit

Potential emissions are referred to as PTE. **Table 1** provides a summary of uncontrolled PTE emissions for the facility based upon a worst-case for operation of the facility of 8760 hr/yr (24 hr/day x 365 day/yr).

Table 1: UNCONTROLLED POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC	Lead
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Curing	110.24	0.01	2.21	1.33	137.07	0.00
Welding	0.02	0.00	0.00	0.00	0.00	0.00
Coating	441.73	0.00	0.00	0.00	900.53	0.00
Natural Gas Heating	0.18	0.01	3.96	0.56	0.13	0.00
Metal Cutting	0.09	0.00	0.00	0.00	0.00	0.00
Wood Cutting	2.05	0.00	0.00	0.00	0.00	0.00
Total, Point Sources	554.30	0.02	6.17	1.89	1037.73	0.00

CO = carbon monoxide

NO_x = nitric oxide

PM = particulate matter

PM_{2.5} = particulate matter 2.5 micrometers or less in diameter

PM₁₀ = particulate matter 10 micrometers or less in diameter

SO₂ = sulfur dioxide

T/yr = tons per year

VOC = volatile organic compound



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Table 2: UNCONTROLLED POTENTIAL TO EMIT FOR HAZARDOUS AIR POLLUTANTS

Hazardous Air Pollutants	PTE (T/yr)
2-Methylnaphthalene	8.11E-07
3-Methylchloranthrene	6.08E-08
Acenaphthene	6.08E-08
Acenaphthylene	6.08E-08
Anthracene	8.11E-08
Benzo(a)anthracene	6.08E-08
Benzo(a)pyrene	4.05E-08
Benzo(b)fluoranthene	6.08E-08
Benzo(g,h,i) perylene	4.05E-08
Benzo(k)fluoranthene	6.08E-08
Chrysene	6.08E-08
Dibenzo(a,h)anthracene	4.05E-08
7,12-Dimethylbenz(a)anthracene	5.41E-07
Fluoranthene	1.01E-07
Fluorene	9.46E-08
Indeno(1,2,3-cd) pyrene	6.08E-08
Naphthalene	2.06E-05
Phenanthrene	5.74E-07
Pyrene	1.69E-07
Polycyclic Organic Matter (POM)	3.85E-07
Benzene	7.10E-05
Dichlorobenzene	4.05E-05
Ethyl benzene	7.81E+00
Formaldehyde	7.81E+00
Hexane	6.08E-02
Toluene	6.36E+00
Xylene	3.78E+02
Arsenic	6.76E-06
Beryllium	4.05E-07
Cadmium	3.72E-05
Chromium	1.85E-04
Cobalt	5.84E-06
Copper	2.87E-05
Manganese	1.37E-03
Mercury	8.78E-06
Nickel	1.86E-04
Vanadium	7.77E-05
Selenium	8.11E-07
Cumene	8.62E+00
Methyl Isobutyl Ketone	5.98E+00
Methyl Methacrylate	6.90E+00
Total	421.18

PAH = polycyclic aromatic hydrocarbon
 POM = polycyclic organic matter
 PTE = potential to emit
 T/yr = tons per year



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6.4 Controlled Potential to Emit

Table 3 provides a summary of controlled PTE criteria pollutant emissions for the facility based upon the facility's operations detailed in the Emissions Overview.

Table 3: CONTROLLED POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC	Lead
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Curing	0.09	0.00	1.61	0.83	0.55	0.52
Welding	0.00	0.00	0.00	0.00	0.00	0.00
Coating	0.14	0.00	0.00	0.00	19.01	0.00
Natural Gas Heating	0.08	0.01	1.80	0.25	0.06	0.00
Metal Cutting	0.01	0.00	0.00	0.00	0.00	0.00
Wood Cutting	0.02	0.00	0.00	0.00	0.00	0.00
Total	0.34	0.01	3.41	1.08	19.62	0.52

CO = carbon monoxide

NO_x = nitric oxide

PM = particulate matter

PM_{2.5} = particulate matter 2.5 micrometers or less in diameter

PM₁₀ = particulate matter 10 micrometers or less in diameter

SO₂ = sulfur dioxide

T/yr = tons per year

VOC = volatile organic compound



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Table 4: CONTROLLED POTENTIAL TO EMIT FOR NON-CARCINOGENIC TOXIC AIR POLLUTANTS

Non-Carcinogenic Toxic Air Pollutants	Curing (lb/hr)	Welding (lb/hr)	Coating (lb/hr)	Natural Gas Heating (lb/hr)	Metal Cutting (lb/hr)	Wood Cutting (lb/hr)	24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level (Modeling Required)? (Y/N)
Naphthalene	6.26E-07		0.00E+00	1.47E-06			2.10E-06	3.33E+00	NO
Hexane	1.85E-03			5.01E-03			6.86E-03	1.20E+01	NO
Toluene	3.49E-06		1.01E-01	9.47E-06			1.01E-01	2.50E+01	NO
Pentane	2.67E-03			7.24E-03			9.91E-03	1.18E+02	NO
Manganese	3.90E-07	1.59E-03		1.06E-06	4.34E-05		1.63E-03	6.70E-02	NO
Barium	4.51E-06			1.23E-05			1.68E-05	3.30E-02	NO
Selenium	2.46E-08			6.68E-08			9.15E-08	1.30E-02	NO
Zinc	2.97E-05			8.08E-05	2.40E-04		3.50E-04	6.67E-01	NO
Cumene	4.38E-03		1.25E-01				1.30E-01	1.63E+01	NO
Ethyl Benzene	2.92E-03		1.04E+00				1.05E+00	2.90E+01	NO
Kaolin			4.81E-02				4.81E-02	1.33E-01	NO
Silica Amorphous			2.03E-02				2.03E-02	6.67E-01	NO
2-Butoxyethanol			2.84E-01				2.84E-01	8.00E+00	NO
n-Butyl Acetate			9.02E-01				9.02E-01	4.73E+01	NO
Calcium Carbonate			1.67E-02				1.67E-02	6.67E-01	NO
Carbon Black			0.00E+00				0.00E+00	2.30E-01	NO
Isopropyl Alcohol			1.95E-01				1.95E-01	6.53E+01	NO
Methyl n-Amyl Ketone			1.83E+00				1.83E+00	1.57E+01	NO
Methyl Isobutyl Ketone			9.48E-02				9.48E-02	1.37E+01	NO
Nonane			4.13E-01				4.13E-01	7.00E+01	NO
Silica Crystalline Quartz			7.30E-04				7.30E-04	6.70E-03	NO
Stoddard Solvent Mineral Spirits			1.01E+00				1.01E+00	3.50E+01	NO
Xylene			4.95E+00				4.95E+00	2.90E+01	NO
Dipropylene Glycol Methyl Ether			1.11E-02				1.11E-02	4.00E+01	NO
Methyl Methacrylate			1.09E-02				1.09E-02	2.73E+01	NO
Silicon Tetrahydride			4.22E-01				4.22E-01	4.67E-01	NO
Vinyl Toluene			2.78E-02				2.78E-02	1.60E+01	NO
Zinc Oxide			0.00E+00				0.00E+00	3.33E-01	NO
Chromium		5.00E-06			1.44E-05		1.94E-05	3.30E-02	NO
Cobalt		5.00E-06					5.00E-06	3.30E-03	NO

lb/hr = pounds per hour



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Table 5: CONTROLLED POTENTIAL TO EMIT FOR CARCINOGENIC TOXIC AIR POLLUTANTS

Carcinogenic Toxic Air Pollutants	Curing (lb/hr)	Welding (lb/hr)	Coating (lb/hr)	Natural Gas Heating (lb/hr)	Metal Cutting (lb/hr)	Wood Cutting (lb/hr)	Annual Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level (Modeling Required)? (Y/N)
3-Methylchloranthrene	1.85E-09			4.35E-09			6.20E-09	3.00E-06	NO
Benzo(a)pyrene	1.23E-09			2.90E-09			4.13E-09	2.00E-06	NO
Benzene	2.15E-06			5.08E-06			7.23E-06	8.00E-04	NO
Formaldehyde	7.69E-05			1.81E-04			2.58E-04	5.10E-04	NO
Arsenic	2.05E-07			4.84E-07			6.89E-07	2.00E-06	NO
Beryllium	1.23E-08			2.90E-08			4.13E-08	2.80E-05	NO
Cadmium	1.13E-06			2.66E-06			3.79E-06	4.00E-06	NO
Nickel	2.15E-06	5.00E-06		5.08E-06	1.20E-05		2.42E-05	2.70E-05	NO
Hexavalent Chromium					5.28E-07		5.28E-07	5.60E-07	NO

lb/hr = pounds per hour



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Table 6: CONTROLLED HAZARDOUS AIR POLLUTANTS EMISSIONS POTENTIAL TO EMIT SUMMARY

Hazardous Air Pollutants	PTE (T/yr)
2-Methylnaphthalene	1.24E-07
3-Methylchloranthrene	9.30E-09
Acenaphthene	9.30E-09
Acenaphthylene	9.30E-09
Anthracene	1.24E-08
Benzo(a)anthracene	9.30E-09
Benzo(a)pyrene	6.20E-09
Benzo(b)fluoranthene	9.30E-09
Benzo(g,h,i) perylene	6.20E-09
Benzo(k)fluoranthene	9.30E-09
Chrysene	9.30E-09
Dibenzo(a,h)anthracene	6.20E-09
7,12-Dimethylbenz(a)anthracene	9.37E-08
Fluoranthene	1.55E-08
Fluorene	1.45E-08
Indeno(1,2,3-cd) pyrene	9.30E-09
Naphthalene	3.15E-06
Phenanthrene	8.79E-08
Pyrene	2.58E-08
Polycyclic Organic Matter (POM)	5.89E-08
Benzene	1.09E-05
Dichlorobenzene	6.20E-06
Ethyl benzene	1.58E+00
Formaldehyde	3.88E-04
n-Hexane	1.05E-02
Toluene	1.45E-01
Xylene	7.40E+00
Arsenic	1.03E-06
Beryllium	6.20E-08
Cadmium	5.68E-06
Chromium	2.47E-05
Cobalt	7.92E-07
Copper	4.98E-06
Manganese	1.38E-04
Mercury	1.52E-06
Nickel	2.24E-05
Vanadium	1.35E-05
Selenium	1.41E-07
Cumene	2.07E-01
Methyl Isobutyl Ketone	1.37E-01
Methyl Methacrylate	4.10E-02
Total	9.52

PAH = polycyclic aromatic hydrocarbon
 POM = polycyclic organic matter
 PTE = potential to emit
 T/yr = tons per year

APPENDIX B – FACILITY DRAFT COMMENTS

The following comments were received from the facility on April 15, 2020:

- Comment #1:** Table 1.1. The applicant requested removal of the usage limits for proposed moldmaking materials. Only Poly 74 and Poly 75 series materials will be used, which do not contain VOC, HAP, or TAP.
- DEQ Response:** The table was updated to clarify there are no usage limits for the approved moldmaking materials, Poly 74 and Poly 75 series.
- Only if using an alternate moldmaking material that was not proposed – allowed under Alternate Daily Curing, Moldmaking, and Coating Usage Scenario requirements – would limits potentially be required when that alternate moldmaking material contains substances resulting in PM, VOC, HAP, or TAP emissions. Because use of Poly 81 series was not proposed, reference to this material was removed from Permit Condition 2.10.
- Comment #2:** Section 3. The applicant requested inclusion of grinding activities associated with welding activities.
- DEQ Response:** Tables 1.1 and 3.1 and Section 3 were updated to include grinding activities. As a source of fugitive emissions, grinding activities will be subject to fugitive emission requirements (Permit Conditions 3.9–3.10). No explicit limits for grinding activities were required beyond these requirements, because weld grinding activities were assumed proportionate to welding wire consumption (30%).
- Comment #3:** Permit Conditions 3.1 and 3.5. The applicant requested the flexibility to conduct welding operations outside of fume extraction control equipment.
- DEQ Response:** Tables 1.1 and 3.1 and Permit Condition 3.1 were updated to allow for operation without the use of fume extraction control equipment. Permit Condition 3.5 requiring fume extraction control equipment was also removed. Welding emissions were a relatively modest contributor to overall facility-wide emissions, and BRC was ensured without accounting for the use of fume extraction control equipment.
- Comment #4:** Permit Conditions 1.2, 3.1, and 3.6. The applicant requested the flexibility to conduct FCAW in addition to GMAW welding operations.
- DEQ Response:** Tables 1.1 and 3.1, and Permit Conditions 3.6 and 3.11 were updated to allow E308 FCAW welding and to establish usage limits. The usage rates specified were used in the development of the emission inventories and ensure facility-wide BRC emissions.
- Comment #5:** Permit Conditions 2.13–2.16. The applicant confirmed that inclusion of the Alternate Daily Curing, Moldmaking, and Coating Usage Scenarios compliance option was requested.
- DEQ Response:** The alternate material compliance option was included as requested.
- Comments #6–9:** The applicant requested inclusion of the requested updates to grinding and welding activities in the statement of basis.
- DEQ Response:** The Statement of Basis was updated consistent with the requested permit changes, including emissions unit and control equipment information and emission inventories (Tables 1, 3, 4, 5, and 6) and discussion provided in the permit conditions review section.



6701 E. Flamingo Ave.
Building 300
Nampa, Idaho 83687

April 15, 2020

Morrie Lewis
Air Quality Permit Analyst
Idaho Department of Environmental Quality
1410 N. Hilton St.
Boise, Idaho 83706

Subject: CXT Incorporated - Draft Permit to Construct and Statement of Basis Comments

Dear Mr. Lewis:

CXT Incorporated (“CXT”) is submitting comments on the draft Permit to Construct (PTC) and draft Statement of Basis for the facility located at 6701 East Flamingo Avenue, Suite 300, Nampa, Idaho 83687. The draft PTC and Statement of Basis were received on April 10, 2020.

CXT has the following comments on the draft PTC.

Comment 1	<p>Requesting removal of maximum operational usage of 5 gallons per day and 500 gallons per year of mold-making materials in Table 1.1 of Section 1.2.</p> <p>Facility intends to strictly utilize Poly 74-Series and Poly 75-Series mold-making materials. These materials do not contain hexamethylene diisocyanate (HDI), methylene diisocyanate (MDI), or any regulated material in Idaho Administrative Code (IDAPA) 58.01.01.585-586. The facility anticipates utilizing approximately 500 gallons per year.</p>
Comment 2	<p>Requesting the inclusion of grinding activities in Section 3 as part of the welding operations.</p> <p>Grinding will occur on welds that are exposed (i.e., window frames, door frames). It has been estimated that approximately 30 percent of the total welds are exposed and require grinding. The grinding activities will be limited by the maximum operational usage of welding wire (7,000 pounds per year). It has been assumed for the emission calculations that all grinding activities will occur away from filtration systems. The attached emission inventory has been updated to include grinding as part of welding operations.</p>
Comment 3	<p>Requesting that Sections 3.1 and 3.5 are revised to allow welding operations to occur away from the filtration systems.</p> <p>Some welding operations (i.e., when buildings are being assembled) are not able to occur with the use of a filtration system. The facility will employ seven full time welders, and it is anticipated that two welders will be dedicated full time to welding away from the filtration systems. Based on the estimated welding man hours away from the filtration system, it has been assumed for the emission calculations that 50 percent of welding operations could occur away from the filtration systems. The attached emission inventory has been updated to include welding operations away from the filtration systems.</p>



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Comment 4	Requesting the inclusion of Flux Cored Arc Welding (FCAW) E308 welding materials to Sections 1.2, 3.1, and 3.7. Requesting maximum operational usage of 10 pounds per day and 1,000 pounds per year for the FCAW E308 welding materials. Additional welding materials will be utilized on-site. As described in comment 3, 50 percent of FCAW E308 welding operations have been assumed to be conducted away from the filtration systems. The attached emission inventory has been updated to include additional welding materials as part of welding operations.
Comment 5	Please include the alternate material usage rate compliance options in Sections 2.13 through 2.16 in the final permit.

CXT comments on the draft Statement of Basis.

Comment 1	Requesting the inclusion of grinding in the Application Scope section as part of the welding operations.
Comment 2	Requesting that Application Scope and Permit Conditions Review sections are revised to allow welding operations to occur away from the filtration systems.
Comment 3	Requesting the inclusion of FCAW E308 welding material in Table 1 of the Technical Analysis section.

Respectfully,

Ben McClellan
Director Environment Health & Safety
CXT Incorporated

Attachments:
Revised Emission Inventory

APPENDIX C – 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: CXT Incorporated
Address: 6701 E. Flamingo Ave., Suite 300
City: Nampa
State: ID
Zip Code: 83687
Facility Contact: Steve Burgess
Title: VP Concrete Products
AIRS No.: 027-00182

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	3.41	0	3.4
SO ₂	0.01	0	0.0
CO	1.09	0	1.1
PM10	0.82	0	0.8
VOC	19.76	0	19.8
Total:	25.09	0	25.1
Fee Due	\$ 5,000.00		

Comments: Includes analysis for coatings alternate compliance option.