Statement of Basis

Permit to Construct No. P-2010.0144
Project ID 61958

Lippert Components Inc – Twin Falls
Twin Falls, Idaho

Facility ID 083-00100

Final

February 8, 2018
Tom Burnham
Permit Writer

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

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
Btu	British thermal units
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent emissions
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
HAP	hazardous air pollutants
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
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
PC	permit condition
PM	particulate matter
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
Rules	*Rules for the Control of Air Pollution in Idaho*
scf	standard cubic feet
SO_2	sulfur dioxide
SO_x	sulfur oxides
T/yr	tons per consecutive 12 calendar month period
TAP	toxic air pollutants
VOC	volatile organic compounds

FACILITY INFORMATION

Description

Lippert Components, Inc (formerly Dexter Chassis Group) manufactures trailers and trailer equipment. Trailer Chassis are welded together and components of the chassis are spray coated with a HAP free material. All coating is performed within a paint booth equipped with a fabric filtration system. The facility is also equipped with three space heating units. Welding is performed using an E70S wire rod and approximately 3,000 lbs of welding wire is used annually.

Paint Booth Operations

Lippert Components, Inc operates one paint booth.

Paint Booth No. 1:
Paint booth No. 1 has been in operation since 2007. This is the original booth used for painting operations by Lippert Components, Inc. The booth uses a pressure pump system with a high-volume, low-pressure (HVLP) spray gun with a transfer efficiency of 65%. This paint booth has one exhaust stack.

Natural Gas-Fired Space Heaters

Natural gas-fired heaters were installed at Lippert Components, Inc at time of construction of the facility. One is an office Heating Unit with a maximum rating of 69,000 Btu/hr. The other two are process units within the spray booth that produce warm air. The capacity of these two units is 1.1 MMBtu/hr each.

Welding Operations

Welding operations are a component of the manufacturing operations at Lippert Components, Inc. Lippert Components, Inc. uses a welding process identified as gas metal arc welding. Welding of steel tubing uses a specific steel core wire (electrode) and rod material. Aluminum welding uses a specific aluminum welding wire (electrode) and rod material. An E70S wire rod is used and approximately 3,000 lbs of welding wire is used annually.

Permitting History

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

April 6, 2011	P-2010.0144 Project 60614, Initial PTC was issued, (S)
October 7, 2011	P-2010.0144 Project 60931 Change of name and ownership, (S)
September 21, 2012	P-2010.0144 Project 60978, increase daily usage of product, Permit status (A) becomes S upon permit issuance.

Application Scope

This PTC is for a minor modification at an existing minor facility. The applicant has proposed to increase coating usage.

Application Chronology

November 21, 2017	DEQ received an application and an application fee.
December 4 – December 19, 2017	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
November 29, 2017	DEQ determined that the application was incomplete.
December 1, 2017	DEQ received supplemental information from the applicant.
December 7, 2017	DEQ determined that the application was complete.

December 8, 2017	DEQ made available the draft permit and statement of basis for peer and regional office review.
December 13, 2017	DEQ made available the draft permit and statement of basis for applicant review.
January 3 – February 2, 2018	DEQ provided a public comment period on the proposed action.
January 3, 2018	DEQ received the permit processing fee.
February 8, 2018	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 ID No.	Sources	Control Equipment	Emission Point ID No.
Paint Booth	Paint Booth: Manufacturer: VOC Containment Systems Model: AA-4 U VRC Air Flow Type: Side Draft Manufacture Date: October 2007 Paint Sprayers: Pressure pump system with HVLP spray guns with a transfer efficiency of 65%.	Paint Booth Filtration System: Manufacturer: Kem-Wove Model: SPS 1.0 Type: Fabric Filter Number of filters: 46 PM_{10} control efficiency no less than: 99.4%	Paint Booth Exhaust Exit height: 30 ft Exit diameter: 2.83 ft Exit flow rate: 12,000 acfm Exit temperature: 180°F
Heating Units	Space Heaters Two heaters with a heat input of 1.1 MMBtu/hr One heater with a heat input of 69,000 Btu/hr		
Welding	Electric Arc Welding Rod: E70S Type: GMAW Wire usage: 3,000 lb/yr	None	Building vents

Emissions Inventories

Potential to Emit

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

Using this definition of Potential to Emit an emission inventory was developed for the coating operations at the facility (see Appendix A) associated with this proposed project. Emissions estimates of criteria pollutant, HAP PTE were based on emission factors from AP-42, operation of 8760 hours per year, and process information specific to the facility for this proposed project (MSDS for coatings).

Uncontrolled Potential to Emit

Using the definition of Potential to Emit, uncontrolled Potential to Emit is then defined as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored

or processed, shall **not** be treated as part of its design **since** the limitation or the effect it would have on emissions **is not** state or federally enforceable.

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

The following table presents the uncontrolled Potential to Emit for regulated air pollutants as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations and the assumptions used to determine emissions for each emissions unit. For this coating operation uncontrolled Potential to Emit is based upon a worst-case for operation of the facility of 8760 hr/yr.

Table 2 UNCONTROLLED POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	$PM_{10}/PM_{2.5}$	SO_2	NO_X	CO	VOC
	T/yr	T/yr	T/yr	T/yr	T/yr
Point Sources					
Paint Booth	115.5	0.00	0.00	0.00	19.0
Heating Units	0.01	0.006	0.97	0.82	0.05
Welding	0.074	0.00	0.00	0.00	0.00
Total, Point Sources	**115.58**	**0.01**	**0.97**	**0.82**	**19.05**

The following table presents the uncontrolled Potential to Emit for HAP pollutants as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations and the assumptions used to determine emissions for each emissions unit. For this coating operation uncontrolled Potential to Emit is based upon a worst-case for operation of the facility of 8760 hr/yr. Then, the worst-case maximum HAP Potential to Emit was determined for this coating operation.

Table 3 UNCONTROLLED POTENTIAL TO EMIT FOR HAZARDOUS AIR POLLUTANTS

Hazardous Air Pollutants	PTE (T/yr)
Chromium Compounds	5.48E-05
Cobalt Compounds	5.48E-05
Manganese Compounds	1.74E-02
Nickel Compounds	5.48E-05
Total	**0.02**

Pre-Project Potential to Emit

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

The following table presents the pre-project potential to emit for all criteria for the one unit being modified as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 4 PRE-PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	$PM_{10}/PM_{2.5}$		SO_2		NO_X		CO		VOC	
	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]
Paint Booth	0.068	0.298	0.00	0.00	0.00	0.00	0.00	0.00	2.43	10.64
Heating Units	0.05	0.01	0.001	0.006	0.222	0.974	0.187	0.818	0.122	0.0536
Welding	0.017	0.074	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Post Project Totals	**0.14**	**0.38**	**0.00**	**0.01**	**0.22**	**0.97**	**0.19**	**0.82**	**2.55**	**10.69**

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

Post Project Potential to Emit

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

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

Table 5 POST PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	$PM_{10}/PM_{2.5}$		SO_2		NO_X		CO		VOC	
	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]
Paint Booth	0.227	0.99	0.00	0.00	0.00	0.00	0.00	0.00	4.34	19.0
Heating Units	0.05	0.01	0.001	0.006	0.222	0.974	0.187	0.818	0.122	0.0536
Welding	0.017	0.074	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Post Project Totals	**0.29**	**1.07**	**0.00**	**0.01**	**0.22**	**0.97**	**0.19**	**0.82**	**4.46**	**19.05**

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

Change in Potential to Emit

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

Table 6 CHANGES IN POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	$PM_{10}/PM_{2.5}$		SO_2		NO_X		CO		VOC	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Pre-Project Potential to Emit	0.14	0.38	0.00	0.01	0.22	0.97	0.19	0.82	2.55	10.69
Post Project Potential to Emit	0.29	1.07	0.00	0.01	0.22	0.97	0.19	0.82	4.46	19.05
Changes in Potential to Emit	**0.15**	**0.69**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.91**	**8.36**

TAP Emissions

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

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

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

Toxic Air Pollutants	Pre-Project Emissions Rates for Units at the Facility (lb/hr)	Post Project Emissions Rates for Units at the Facility (lb/hr)	Change in Emissions Rates for Units at the Facility (lb/hr)	Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Ethylene Glycol Butyl Ether	0.00	6.57	6.57	**8**	**No**
Carbon Black	3.00E-04	0.006	5.70E-03	**0.23**	**No**
2-Butanol	0.00	2.22	2.22	**20.3**	**No**
Kaolin	0.00	0.022	2.20E-02	**0.133**	**No**
N-Butyl Alcohol	0.00	4.01	4.01	**10**	**No**
Dipropylene Glycol Monoethyl Ether	0.00	1.78	1.78	**40**	**No**

Acetone	0.00	3.18	3.18	**119**	**No**
Chromium Metal	3.74E-06	1.25E-05	8.76E-06	**3.JE-02**	**No**
Cobalt Metal	8.12E-07	1.25E-05	1.17E-05	**3.3E-03**	**No**
Manganese	1.99E-04	3.98E-03	3.78E-03	**3.33E-01**	**No**
Nickel	5.3E-06	1.25E-05	7.20E-06	**2.7E-05**	**No**

There were no TAP emission increases associated with this project that exceeded ELs (screening emissions values). Therefore, modeling of TAP emissions were not required.

Post Project HAP Emissions

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

Table 8 HAZARDOUS AIR POLLUTANTS EMISSIONS POTENTIAL TO EMIT SUMMARY

Hazardous Air Pollutants	PTE (lb/hr)	PTE (T/yr)
Chromium Compounds	1.25E-05	5.48E-05
Cobalt Compounds	1.25E-05	5.48E-05
Manganese Compounds	3.97E-03	1.74E-02
Nickel Compounds	1.25E-05	5.48E-05
Totals	**0.004**	**0.02**

Ambient Air Quality Impact Analyses

No modeling requirements were necessary for this project. Facility-wide controlled emissions were below all modeling thresholds.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

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

Facility Classification

The AIRS/AFS facility classification codes are as follows:

For HAPs (Hazardous Air Pollutants) Only:

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

SM80 = Use if a synthetic minor (potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable limitations) and the permit sets limits ≥ 8 T/yr of a single HAP or ≥ 20 T/yr of THAP.

SM = Use if a synthetic minor (potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable limitations) and the potential HAP emissions are limited to < 8 T/yr of a single HAP and/or < 20 T/yr of THAP.

B = Use when the potential to emit without permit restrictions is below the 10 and 25 T/yr major source threshold

UNK = Class is unknown

For All Other Pollutants:

A = Actual or potential emissions of a pollutant are ≥ 100 T/yr.

SM80 = Use if a synthetic minor for the applicable pollutant (potential emissions fall below 100 T/yr if and only if the source complies with federally enforceable limitations) and potential emissions of the pollutant are ≥ 80 T/yr.

SM = Use if a synthetic minor for the applicable pollutant (potential emissions fall below 100 T/yr if and only if the source complies with federally enforceable limitations) and potential emissions of the pollutant are < 80 T/yr.

B = Actual and potential emissions are < 100 T/yr without permit restrictions.

UNK = Class is unknown.

Table 9 REGULATED AIR POLLUTANT FACILITY CLASSIFICATION

Pollutant	Uncontrolled PTE (T/yr)	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM	115.5	0.70	**100**	SM
PM_{10}	115.5	0.70	**100**	SM
$PM_{2.5}$	71.8	0.32	**100**	B
SO_2	0.01	0.01	**100**	B
NO_X	0.97	0.97	**100**	B
CO	0.82	0.82	**100**	B
VOC	61.5	61.5	**100**	B
HAP (single)	0.017	0.017	**10**	B
HAP (total)	0.02	0.02	**25**	B
Pb	<100	<100	**100**	B

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 ..... Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the modified emissions source. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.201. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401 ..... Tier II Operating Permit

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

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625 ..... Visible Emissions

The sources of PM emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Condition 2.4.

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

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

Post project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for PM_{10}, SO_2, NO_X, CO, VOC, and 10 tons per year for any one HAP, or 25 tons per year for all HAP combined, as demonstrated previously in the Emissions Inventories Section of this analysis. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006 and the requirements of IDAPA 58.01.01.301 do not apply.

PSD Classification (40 CFR 52.21)

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

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

NSPS Applicability (40 CFR 60)

The facility is not subject to any NSPS requirements 40 CFR Part 60.

NESHAP Applicability (40 CFR 61)

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

MACT/GACT Applicability (40 CFR 63)

The facility has proposed to operate as a minor source of hazardous air pollutant (HAP) emissions, and would be subject to the requirements of 40 CFR 63, Subpart HHHHHH–National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources. However, the facility applied for and received an exemption from EPA for this subpart. Permit conditions 2.8 and 2.12 require the facility to keep a copy of the letter onsite and prohibit use of coatings containing MeCl. DEQ is not delegated 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.

Regulated Sources

Table 1.1 was updated to correctly show welding as an emission source and the building space heater emission source and control. Welding was previously reported as fugitive emissions, but occurs indoors and could reasonable pass through a sack or vent. These sources are both in the facility PTE and have not changed for this project, and since the facility-wide emission estimates are below regulatory concern, additional regulation was not required. Also, welding emissions are estimated to be less than one tenth of a pound per hour for any single criteria pollutant and the applicant is not proposing any additional usage.

Permit Condition 2.2

Table 2.1 was updated in the same manner as Table 1.1.

Permit Condition 2.3

In accordance with DEQ boiler plate coating limits, this table was changed to regulate $PM_{10}/PM_{2.5}$ and VOC by pounds per day, and adjusted up to the proposed coating usage.

Permit Condition 2.6

Daily usage rates were included for each paint. A worst case demonstration was done in the original EI including all paints, therefore the coatings were aggregated. Additionally, DEQ staff summed the worst case outcomes to check against hourly screening emission levels (EL) in IDAPA 58.01.01.585 resulting in no EL exceeded for each compound present in the listed coatings. The applicant had requested a limit of 3500 cans of Aervoe Zynolyte Speed Enamel. DEQ does not regulate paints in individual spray cans, due to the varying size and definition of what constitutes a can of paint. The applicant has demonstrated that the estimated use would not violate any emissions thresholds, but the number of spray cans used will not be regulated by this permit.

Permit Condition 2.7

Annual usage rates were included for each paint by multiplying the daily usage times the worst case 366 days of usage per year. Coatings listed together are regulated as an aggregate total.

Permit Conditions 2.15 through 2.21

Alternate Daily Coating Usage Scenarios boiler plate permit conditions are added for coating usage monitoring and recordkeeping. Recalculating pollutants in Permit Conditions 2.17-2.19 is only necessary when coatings other than those listed in the permit are used at the facility in a daily scenario.

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c or IDAPA 58.01.01.404.01.c. During this time, there was a request for a public comment period on DEQ's proposed action. Refer to the chronology for public comment opportunity dates.

Public Comment Period

A public comment period was made available to the public in accordance with IDAPA 58.01.01.209.01.c. During this time, comments were submitted in response to DEQ's proposed action. Refer to the chronology for public comment period dates.

A response to public comments document has been crafted by DEQ based on comments submitted during the public comment period. That document is part of the final permit package for this permitting action.

APPENDIX A – EMISSIONS INVENTORIES

Lippert Components, Inc.
Twin Falls, ID
Construction Permit Summary

	Pollutant							
	NO_x	CO	PM/PM_{10}	$PM_{2.5}$	SO_2	VOC	Individual TAP	Total TAPs
Potential-to-Emit (tons/yr)	0.97	0.82	115.5	71.76	0.01	61.5	17.6	46.8
Current Emission Limits (tons/yr)	---	---	0.298	---	---	10.64	---	---
Proposed Emission Limits (tons/yr)	---	---	0.99	0.62	---	19.00	---	---
Change in Emission Limits (tons/yr)	---	---	0.69	0.62	---	8.36	---	---
Aggregate Emission Increases total 9.67tpy, thus between 1tpy and 10TPY. Per IDAPA 58.01.01 Section 225, Construction Processing Fee should be $2,500.00								
Facility Wide Actual Emissions (tons/yr)	0.49	0.41	1.31	0.93	0.003	19.02	7.9	10.0

Lippert Components, Inc.
Twin Falls, ID
Material Data

						TAPs (% by weight)							
Vendor	**Product Code**	**Description**	**Density (lbs/gal)**	**VOC (% by weight)**	**Solids (% by weight)**	**Ethylene Glycol Butyl Ether 111-76-2**	**Carbon Black 1333-86-4**	**2-Butanol 78-92-2**	**Kaolin 1332-58-7**	**N-Butyl Alcohol 71-36-3**	**Dipropylene Glycol Monoethyl Ether 34590-94-8**	**Acetone 67-64-1**	**Total TAPs**
Patriot	3-1540	HAPs Free W/R Enamel	9.34	10.69%	89.31%	10%	1.90%						11.9%
Patriot	6-KMA-0210	HAPs Free W/R Enamel	8.45	13.85%	86.15%	3%	3%				3%		9.0%
Sherwin Williams	F75BC500	Waterborne	8.59	14.20%	85.80%	10%	2%	3.68%					15.7%
Cloverdale Paint	792512	W/R Gloss Enamel Black	12.68	15.73%	84.27%	4.5%	1.5%		7%	4.5%			
Aervoe	Zynlote Speed E-namel	Speed E-namel	0.69	14%	86%						5%	40%	45.0%
Univar	Glycol Ethers	Glycol Ether Solvent	7.5	100%	0%	99%							99%

Lippert Components, Inc.
Twin Falls, ID
Potential-to-Emit Calculations

			Coating Application Rate								Uncontrolled Potential-to-Emit Calculations										
Vendor	Product Code	Description	Number of guns per EU	Per Gun	Max Throughput Rate	Density	VOC Content	VOC Content	Solid Content	Solids Content	VOC	PM/PM$_{10}$ [2]	PM$_{2.5}$ [2]	Ethylene Glycol Butyl Ether 111-76-2	Carbon Black 1333-86-4	2-Butanol 78-92-2	Kaolin 1332-58-7	N-Butyl Alcohol 71-36-3	Dipropylene Glycol Monoethyl Ether 34590-94-8	Acetone 67-64-1	Total TAPs
				(gals/min)	(gals/hr)	(lbs/gal)	(% by weight)	(lbs/gal)	(% by weight)	(lbs/gal)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
Fabtech	3-1540	HAPs Free W/R Enamel				9.36	50.7%	0.998	89.3%	8.36	30.7	89.91	55.75	28.8	1.91	0	0	0	0	0	30.68
Fabtech	3-4MA-0210	HAPs Free W/R Enamel				8.45	13.9%	1.17	86.2%	7.28	36.0	78.47	48.65	7.81	2.73	0	0	0	7.81	0	18.35
Sherwin Williams	F75BC500	Waterborne	1	0.117	7.021	8.59	14.2%	1.22	85.8%	7.37	37.6	79.66	49.35	26.5	1.85	9.7	0	0	0	0	38.0
Clover Gate Paint	793532	W/R Gloss Enamel Black				12.68	15.7%	1.99	84.3%	10.69	61.4	115.18	71.41	17.6	2.05	0	9.57	17.6	0	0	46.8
Aerosol			Lbs/Can	Cans/Hr	Total [lbs/hr]																
Aerosol	Zyrosite Speed Enamel	Speed Enamel	0.68	0.193	7.96		14.0%		50.7%		4.9	11.44	7.22	0	0	0	0	0	1.74	13.6	15.3
										Uncontrolled Potential-to-Emit (excluding Cleaning Solvent)	(tons/yr)	61.4	115.2	71.41	28.8	2.73	9.74	9.57	17.6	7.81	13.9	46.8
											(lbs/hr)	14.02	26.30	16.30	6.57	0.62	2.22	2.18	4.01	1.78	3.18	10.68
															Controlled TAPs Emission Rate (lbs/hr)							
															6.57	0.006	2.22	0.022	4.01	1.78	3.18	
															IDAPA 58.01.01 Section 585 TAPs EL Threshold (lbs/hr)							
															6	0.23	20.3	0.133	10	40	119	
Cleaning Solvent (Gun Wash)																							
Univar	Glycol Ethers	Glycol Ether Solvent	1	0.117	7.63	7.50	100%	7.50	0%	0%	211.0	0	0	228.7	0	0	0	0	0	0	228.7

[1] Spray gun claims a 65% transfer efficiency and aerosol cans claim 35% transfer efficiency

[2] $PM_{2.5}$ emissions are calculated by taking 62% of the PM total as shown for water-based coatings. Reference: *AQMD Updated CEIDARS List with PM2.5 Fractions*

Calculations Methodology:

*Uncontrolled PTE VOC Emissions (lbs/hr) = Max. Throughput Rate (gals/hour) * VOC Content (lbs/gal)*

*Uncontrolled PTE PM/PM$_{10}$/PM$_{2.5}$ Emissions (lbs/hr) = Max. Throughput Rate (gals/hour) * Solids Content (lbs/gal) * (1 - 0.65 Transfer Efficiency (%))*

*Uncontrolled PTE TAPs Emissions (lbs/hr) = Max. Throughput Rate (gals/hour) * Material Density (lbs/gal) * TAPs Content (%)*

*Uncontrolled PTE Emissions (tons/year) = Uncontrolled PTE Emission Rate (lbs/hr) * 8760 hrs/year * 1 ton/2000 lbs*

Lippert Components, Inc.
Twin Falls, ID
Actual Emission Calculations

Facility Wide Projected Actual Emissions

Vendor	Product Code	Description	Actual Usage	Density	VOC Content	VOC Content	Solid Content	Solids Content	Actual Emissions											
									VOC	PM/PM$_{10}$[1]	PM$_{2.5}$[1]	Ethylene Glycol Butyl Ether 111-76-2	Carbon Black 1333-86-4	2-Butanol 78-92-2	Kaolin 1332-58-7	N-Butyl Alcohol 71-36-3	Dipropylene Glycol Monoethyl Ether 34590-94-8	Acetone 67-64-1	Total TAPs
			(gals/yr)	(lbs/gal)	(% by weight)	(lbs/gal)	(% by weight)	(lbs/gal)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
Patriot	3-1540	HAPs Free W/R Enamel	4250	9.34	10.7%	1.00	89.3%	8.34	2.12	0.06	0.04	1.98	0.001	0.0	0	0	0	0	1.99
Patriot	6-KMA-0210	HAPs Free W/R Enamel	4250	8.45	13.9%	1.17	86.2%	7.28	2.48	0.05	0.03	0.54	0.002	0.0	0	0	0.54	0	1.08
Sherwin Williams	F75BC500	Waterborne	4250	8.59	14.2%	1.22	85.8%	7.37	2.59	0.05	0.03	1.83	0.001	0.67	0	0	0	0	2.50
Cloverdale Paint	792512	W/R Gloss Enamel Black	4250	12.68	16%	1.99	84%	10.69	4.24	0.08	0.05	1.21	0.001	0.0	0.007	1.21	0	0	2.43
Univar	Glycol Ethers	Glycol Ether Solvent	500	7.50	100%	7.50	0%	0.00	1.88	0	0	1.86	0	0.0	0	0	0	0	1.86
Aerosol[2]			(cans/yr)	(lbs/can)															
Aervoe	Zynlote Speed E-namel	Speed E-namel	3500	0.69	14%	—	86%	—	0.17	0.67	0.42	0	0	0	0	0	0.06	0.48	0.543
								Total (tons/yr)	**13.48**	**0.93**	**0.57**	**7.42**	**0.01**	**0.67**	**0.01**	**1.21**	**0.60**	**0.48**	**10.40**

Worst Case Individual Paint Limits

Vendor	Product Code	Description	Actual Usage	Density	VOC Content	VOC Content	Solid Content	Solids Content	Actual Emissions											
									VOC	PM/PM$_{10}$[1]	PM$_{2.5}$[1]	Ethylene Glycol Butyl Ether 111-76-2	Carbon Black 1333-86-4	2-Butanol 78-92-2	Kaolin 1332-58-7	N-Butyl Alcohol 71-36-3	Dipropylene Glycol Monoethyl Ether 34590-94-8	Acetone 67-64-1	Total TAPs
			(gals/yr)	(lbs/gal)	(% by weight)	(lbs/gal)	(% by weight)	(lbs/gal)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
Patriot	3-1540	HAPs Free W/R Enamel	17000	9.34	0.11	1.00	0.89	8.34	8.49	0.25	0.15	7.94	0.005	0	0	0	0	0	7.94
Patriot	6-KMA-0210	HAPs Free W/R Enamel		8.45	0.14	1.17	0.86	7.28	9.95	0.22	0.13	2.15	0.008	0	0	0	2.15	0	4.32
Sherwin Williams	F75BC500	Waterborne		8.59	0.14	1.22	0.86	7.37	10.37	0.22	0.14	7.30	0.005	2.69	0	0	0	0	9.99
Cloverdale Paint	792512	W/R Gloss Enamel Black		12.68	0.16	1.99	0.84	10.69	16.95	0.32	0.20	4.85	0.006	0	0.026	4.85	0	0	9.73
								Worst Case Max Total	(tons/yr)	**16.95**	**0.32**	**0.20**	**7.94**	**0.008**	**2.69**	**0.026**	**4.85**	**2.15**	**0**	**9.99**
									(lbs/hr)											

Proposed Actual Booth Permit Limits[4]

Pollutant	Tons/Yr	Lbs/Hr
VOC	19.0	4.34
PM$_{10}$	0.99	0.227
PM$_{2.5}$	0.62	0.141

[1] Total enclosed booth uses a spray gun claiming a 65% transfer efficiency and wall filters claiming a 99.4% control efficiency

[2] Aerosol coating claims a 35% transfer efficiency

[3] PM$_{2.5}$ emissions are calculated by taking 62% of the PM total as shown for water based coatings. Reference: *AQMD Updated CEIDARS List with PM2.5 Fractions*

[4] VOC total is sum of worst case paint coating, glycol ether cleaner, and aerosol VOC emissions. PM10/PM2.5 total is sum of worst case paint coating and aerosol PM emissions

Calculations Methodology:

*Actual VOC Emissions (tons/yr) = Actual Usage (gals/yr) * VOC Content (lbs/gal) * 1 ton/2000 lbs*

*Actual PM/PM$_{10}$ Emissions (tons/yr) = Actual Usage (gals/yr) * Solids Content (lbs/gal) * (1 - 0.65 Transfer Efficiency (%)) * (1 - 0.99 Control Efficiency(%)) * 1 ton/2000 lbs*

*Actual TAPs Emissions (tons/yr) = Actual Usage (gals/yr) * Material Density (lbs/gal) * TAPs Content (%) * 1 ton/2000 lbs*

Lippert Components, Inc.
Twin Falls, ID
Natural Gas Emissions

Emission Unit		Heater			Heater			Building Heating			Facility Wide Combustion Emissions	
Max Firing Rate	(Btu/hr)	1,100,000			1,100,000			69,000				
	(MMCf/hr)	0.00108			0.00108			0.00007				
Pollutant	Emission Factor (lbs/MMCf)[1]	Potential Emissions		Actual Emissions	Potential Emissions		Actual Emissions	Potential Emissions		Actual Emissions	Potential Emissions	Actual Emissions
		(lbs/hr)	(tons/yr)	(tons/yr)	(lbs/hr)	(tons/yr)	(tons/yr)	(lbs/hr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
NO_x	100	0.11	0.47	0.24	0.11	0.47	0.24	0.01	0.03	0.01	0.97	0.49
CO	84	0.09	0.40	0.20	0.09	0.40	0.20	0.01	0.02	0.01	0.82	0.41
$PM/PM_{10}/PM_{2.5}$	7.6	0.01	0.04	0.02	0.01	0.04	0.02	0.00	0.00	0.00	0.07	0.04
SO_2	0.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.003
VOC	5.5	0.01	0.03	0.01	0.01	0.03	0.01	0.00	0.00	0.00	0.05	0.03
CO_2	120,000	129.41	566.82	283.41	129.41	566.82	283.41	8.12	35.56	17.78	1169.20	584.60
CH_4	2.3	0.00	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.02	0.01
N_2O	2.2	0.00	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.02	0.01
CO_{2e}[2]	120,713	130.18	570.19	285.10	130.18	570.19	285.10	8.17	35.77	17.88	1176.15	588.08
Total HAPs	1.89	0.002	0.009	0.004	0.002	0.009	0.004	0.000	0.001	0.0003	0.02	0.01

1. Emission Factors are from AP-42 Chapter 1.4 "Natural Gas Combustion"
2. GWP: CH4 = 25, N2O = 298

Lippert Components, Inc.
Twin Falls, ID
Welding Emissions

Electrode Type	Usage[1] (lbs/yr)	*Emission Factor[2] Units*	PM_{10}	$PM_{2.5}$[3]	CR	CR(VI)	Co	Mn	Ni	Pb	Total HAP
			lb/10³ Lb	---	*10⁻¹ lb/10³ lb HAP Emission Factor of Electrode Consumed*						
E70S	109500	Emission Factor	5.2	---	0.01	ND	0.01	3.18	0.01	ND	
		Emissions (lbs/yr)	569.40	546.62	0.110	ND	0.110	34.82	0.110	ND	
Potential Emissions (lbs/yr)			569.40	546.62	0.110	0	0.110	34.82	0.110	0	35.15
% of Maximum Operation			100.00%								
Potential Emissions (lbs/hr)			6.50E-02	6.24E-02	1.25E-05	0	1.25E-05	3.98E-03	1.25E-05	0	
IDAPA 58.01.01 Section 585 & 586 TAPs EL Threshold (lbs/hr)			NA	NA	3.3E-02	5.6E-07	3.3E-03	3.33E-01	2.7E-05	2.7E-05	
			NA	NA	Compliant	Compliant	Compliant	Compliant	Compliant	Compliant	
Potential Emissions (lbs/day)			1.56E+00	1.50E+00	3.00E-04	0	3.00E-04	9.54E-02	3.00E-04	0	9.63E-02
Potential Emissions (tons/yr)			**2.85E-01**	**2.73E-01**	**5.48E-05**	**0**	**5.48E-05**	**1.74E-02**	**5.48E-05**	**0**	**1.76E-02**

[1] Maximum PTE usage is 300lbs/day x 365days/yr

[2] Emission Factors from AP-42 12.19 Electric Arc Welding

[3] $PM_{2.5}$ emissions are calculated by taking 96% of the PM_{10} total as shown for arc-welding. Reference: *AQMD Updated CEIDARS List with PM2.5 Fractions*

APPENDIX B – FACILITY DRAFT COMMENTS

The following comments were received from the facility on December 27, 2017:

Facility Comment: Lippert would like this aggregate limit in place of individual limits to minimize the limiting effect on individual coatings that could affect future production. If you reference the application's calculations which I've attached again, under the ***Actual Tab***, you will see the proposed VOC limit in this application considered the worst-case coating (Cloverdale) using 17,000 gals/yr as a demonstration to show the facility would never exceed these limits using a varying combination of the other coatings.

DEQ Response: Since a worst case demonstration was done in the original EI, this is supported and will be incorporated into the usage limits. Additionally, DEQ staff summed the worst case outcomes to check against hourly screening emission levels (EL) in IDAPA 58.01.01.585 resulting in no EL exceeded for the sum of coatings.

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: Lippert Components Inc - Twin Falls
Address: 427 Hankins Road South
City: Twin Falls
State: ID
Zip Code: 83341
Facility Contact: Nathan Lundquist
Title: EHS Manager
AIRS No.: 083-00100

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	0.0	0	0.0
SO_2	0.0	0	0.0
CO	0.0	0	0.0
PM10	0.7	0	0.7
VOC	8.4	0	8.4
TAPS/HAPS	0.0	0	0.0
Total:	0.0	0	**9.1**
Fee Due	$ 2,500.00		

Comments: