

Statement of Basis

**Permit to Construct No. P-2015.0011
Project ID 61486**

**Noffsinger Manufacturing
Filer, Idaho**

Facility ID 083-00058

Final

August 19, 2016
Shawnee Chen, P.E. 
Senior Air Quality Engineer

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

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE	3
FACILITY INFORMATION	5
Description	5
Permitting History	6
Application Scope	6
Application Chronology	6
TECHNICAL ANALYSIS	7
Emissions Units and Control Equipment	7
Emissions Inventories	9
Ambient Air Quality Impact Analyses	16
REGULATORY ANALYSIS.....	16
Attainment Designation (40 CFR 81.313)	16
Facility Classification.....	16
Permit to Construct (IDAPA 58.01.01.201).....	17
Tier II Operating Permit (IDAPA 58.01.01.401)	17
Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70).....	17
PSD Classification (40 CFR 52.21)	17
NSPS Applicability (40 CFR 60).....	17
NESHAP Applicability (40 CFR 61).....	18
MACT Applicability (40 CFR 63).....	18
Permit Conditions Review	18
PUBLIC REVIEW.....	21
Public Comment Opportunity	21
APPENDIX A – EMISSIONS INVENTORIES.....	22
APPENDIX B – FACILITY DRAFT COMMENTS.....	23
APPENDIX C – PROCESSING FEE	25

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BMP	best management practices
Btu	British thermal units
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CAS No.	Chemical Abstracts Service registry number
CBP	concrete batch plant
CEMS	continuous emission monitoring systems
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CI	compression ignition
CMS	continuous monitoring systems
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	CO ₂ equivalent emissions
COMS	continuous opacity monitoring systems
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
ESP	electrostatic precipitator
FEC	Facility Emissions Cap
gal	gallon
GHG	greenhouse gases
gph	gallons per hour
gpm	gallons per minute
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
HHV	higher heating value
HMA	hot mix asphalt
hp	horsepower
hr/yr	hours per consecutive 12 calendar month period
ICE	internal combustion engines
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
iwg	inches of water gauge
km	kilometers
lb/hr	pounds per hour
lb/qtr	pound per quarter
m	meters
MACT	Maximum Achievable Control Technology
mg/dscm	milligrams per dry standard cubic meter
MMBtu	million British thermal units
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants

NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
O&M	operation and maintenance
O ₂	oxygen
PAH	polyaromatic hydrocarbons
PC	permit condition
PCB	polychlorinated biphenyl
PERF	Portable Equipment Relocation Form
PM	particulate matter
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
ppm	parts per million
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
PTC	permit to construct
PTC/T2	permit to construct and Tier II operating permit
PTE	potential to emit
PW	process weight rate
RAP	recycled asphalt pavement
RFO	reprocessed fuel oil
RICE	reciprocating internal combustion engines
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SCL	significant contribution limits
SDS	Safety Data Sheets
SIP	State Implementation Plan
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO ₂	sulfur dioxide
SO _x	sulfur oxides
T/day	tons per calendar day
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar month period
T ₂	Tier II operating permit
TAP	toxic air pollutants
TEQ	toxicity equivalent
T-RACT	Toxic Air Pollutant Reasonably Available Control Technology
ULSD	ultra-low sulfur diesel
U.S.C.	United States Code
VOC	volatile organic compounds
yd ³	cubic yards
µg/m ³	micrograms per cubic meter

FACILITY INFORMATION

Description

Noffsinger Manufacturing Co., Inc. manufactures agricultural conveyor chains.

The facility consists of the following main process lines:

- Hook Chain Process (Steel Digger Chain Links Process)

Since the original permit in 1978, hook chain production has gone down about 90% because it has been replaced with the belt links.

The hook chain process is as follows: Steel (3/8, 7/16, 1/2" diameter) rods go into a natural gas-fired oven (1,750 °F), then to a forming fixture, then into a quench tank (currently, UCON-E mixed with water, no HAP/TAP) which is heated by a 225,000 Btu/hr natural gas-fired boiler, then into a natural gas-fired draw furnace (750 °F) to finish the treating process and come out as a fully heat treated link of steel. This process is active for 1,000 hours/year maximum.

At this point, the link can be sold as a plain link as it is, or it can be prepped for a plastisol or rubber coating. If it goes to the plastisol or glued on rubber line, it is coated with primer. Refer to primer coating for details. If it will have rubber molded on it, it goes to the spray booth to get the Chemlok 252x glue sprayed on. Chemlok 252x glue contains the following toxic air pollutants (TAP): xylene (65%), ethyl benzene (15%), inorganic lead salt (5%), and carbon black (5%) and the following hazardous air pollutants (HAP): xylene, ethyl benzene, and inorganic lead salt.

- Belt Chain Process

Steel (3/8, 7/16, 1/2" dia.) rods are preheated with an electrical induction coil, formed, quenched in a water bath, then reheated in another electrical induction coil to draw down the link. This results in a fully heat treated link.

At this point, it is the same as the Hook Chain Process, the link can be sold as it is, coated with plastisol, or have rubber glued or molded on it. If it goes to the plastisol or glued on rubber line, it is coated with primer. Refer to primer coating for details. If it will have rubber molded on it, it goes to the spray booth to get the Chemlok 252x glue sprayed on.

- Primer Coating

The primer consists of a 1:1 mix of the Lakeside Primer containing the following TAP: 2-butanone, toluene, diacetone alcohol, cyclohexanone, 1-butanol, and carbon black and the following HAP: toluene and methyl ethyl ketone in a dip tank. After dipping, rods are suspended above the tank for several minutes to dry.

- Vinyl Plastisol Chain Coating Process

After coated with primer, the rods are heated in an electrical induction heater, then dipped in the plastisol dip tank one at a time for one minute, then cured in an electrically heated oven for 15-18 minutes at 300 to 425 °F. The plastisol contains VOC and no longer contains carbon black. The oven has a Smog Hog electrostatic precipitator to control particulate emissions. Individual links are then assembled into a continuous pattern at room temperature and then transferred to storage.

- Rubber Molding Process

For rubber coated links, before applying Chemlok 252x adhesive, rods are cleaned in a soak tank containing Oakite 131 that consists of 30-60% inhibited phosphoric acid, a non-carcinogenic TAP listed in IDAPA 58.01.01.585. The soak tank is cleaned every fall. Enprox 714 that consists of 40 -50% sodium hydroxide is used to neutralize the weakened phosphoric acid before its disposal. Sodium hydroxide is a non-carcinogenic TAP listed in IDAPA 58.01.01.585. Chemlok 252x that binds steel to the rubber is sprayed to the cleaned rods in the spray booth. The link then goes to an electrically heated rubber press to mold the rubber to the link. The emissions of phosphoric acid and sodium hydroxide in the solutions are negligible.

- Rubber Glue-On Process

The rods are wiped with Xylene, a TAP/HAP, then Tuff Tac glue cement is squirted on the inside of the extruded rubber coating (purchased item), which is then slid onto the link. Tuff Tac glue cement includes Heptane (93%) and Carbon Black (<2%), both non-carcinogenic TAP listed under IDAPA 58.01.01.585. The rods adhered with the rubber tubing are then baked at 300 °F for 20 minutes in a natural gas-fired oven which is only used for this process.

- Finishing Coating

In assembly building, belt links are riveted to rubber belting. If the links are plain links with no coating, then the whole belt is dipped into black paint (Diamond Vogel Gloss Black Enamel). Diamond Vogel Gloss Black Enamel contains the following TAP: Ethylene Glycol Butyl Ether (5-20%), Secondary Butanol (1-5%), and Carbon Black (0.591%). The belts are removed and suspended above the tank for several minutes to drip and partially dry and then set outside to finish drying.

Rubber coated rods are not dipped into this tank due to their coating. They are riveted to the belt and shipped to the customer.

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).

July 1, 1978	1480-0016, Air Quality Permit, Permit status (S)
April 9, 1991	1480-0050, Air Quality Permit, Permit status (S)
August 9, 1991	1480-0050, Air Quality Permit, Permit status (S)
September 26, 1991	1480-0003, Air Quality Permit, Permit status (S)
December 27, 1994	083-00058, Air Quality Permit, Permit status (S)
February 16, 1996	083-00058, Air Quality Permit, Permit status (S)
June 9, 2006	P-050417, Permit to Construct, updating the facility name, contact information, and responsible official and consolidating the existing applicable permits, Permit status (A, but will become S upon issuance of this permit)

Application Scope

This PTC is for a minor modification at an existing minor facility.

The applicant has proposed to revise the PTC to include all current operations at the facility. They are hook chain and belt chain fabrication, primer coating, plastisol coating, rubber coating, chain assembling, and finishing coating. The applicant has also requested that the PTC provides operational flexibilities, such as allowing use of different materials in the processes.

Application Chronology

March 6, 2015	DEQ received an application.
March 9, 2015	DEQ received an application fee.
March 16 – March 31, 2015	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
March 26, 2015	DEQ determined that the application was incomplete.
June 2, 2015	DEQ received supplemental information from the applicant.

June 25, 2015 DEQ determined that the application was complete.

August 6, 2015 DEQ made available the draft permit and statement of basis for peer and regional office review.

August 19, 2015 DEQ made available the draft permit and statement of basis for applicant review.

December 10, 2015 DEQ made available the 2nd draft permit and statement of basis for peer and regional office review.

May 4, 2016 DEQ made available the 2nd draft permit and statement of basis for applicant review.

September 1, 2015 DEQ received the permit processing fee.

August 19, 2016 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
1154 ASSES NO.	Hook Chain Process <u>Pre-heat oven for the hook line</u> Manufacturer: custom built Manufacture date: 1972 Date of modification: 2002 Heat input rating: 12.8 MMBtu/hr Max. production: 1,500 to 3,000 links per day Fuel: natural gas Maximum operation: 1,000 hr/yr	None
1087 ASSET NO.	Hook Chain Process <u>Residential boiler for heating hook line quench tank:</u> Manufacturer: LAARS Heating System Model: JVS 226 NKI SU2 MINI-THERM New boiler installed date: 2012 Heat input rating: 225,000 Btu/hr Fuel: natural gas	None
1149 ASSES NO.	Hook Chain Process <u>Draw furnace for the hook line</u> Manufacturer: custom built Manufacture date: 1972 Date of modification: 2007 Heat input rating: 2.56 MMBtu/hr Max. production: 1,500 to 3,000 links per day Fuel: natural gas	None

Source ID No.	Sources	Control Equipment
1153 ASSES NO.	Hook Chain Process <u>0.62 Dia. rod oven for the hook line</u> Manufacturer: Custom built Manufacture date: 2005 Heat input rating: 0.5 MMBtu/hr Fuel: natural gas	None
1372 ASSES NO.	Primer Coating <u>Primer paint dip tank</u> Manufacturer: custom built Manufacture date: 1958 Max. capacity/size: 110 gallons Material: materials containing HAP/TAP Maximum operating hour: 1,200 hr/yr Actual operating hour: 1,000 hr/yr	None
NA	Plastisol Process <u>Plastisol dip tank</u> Manufacturer: custom built Manufacture date: 1989 Max. capacity/size: 225 gal Material: currently, materials containing volatile organic compounds (VOC) but no toxic air pollutants (TAP) or hazardous air pollutants (HAP)	None
NA	Plastisol Process <u>Electrically heated Plastisol cushion coating curing oven</u> Manufacturer: custom built Manufacture date: 1989 Max. capacity/size: 840 cubic feet	Electrostatic precipitator Manufacturer: United Air Specialist Model number: APC-22-1 Inlet flowrate: 2,000 acfm

Source ID No.	Sources	Control Equipment
	<p>Rubber Molding Process</p> <p><u>Spray booth</u> Manufacturer: Spray Tech, Junair Model: 24'L, 14'W, 9'H Type: Side downdraft Manufacture Date: 1999</p> <p><u>Spray gun</u> Manufacturer: Central Pneumatic Model: 69708 Type: 32 oz. Siphon feed Rated Capacity: 10 cfm @ 60 psi</p> <p><u>Spray material</u> Spray adhesive: Chemlok 252x (containing HAP/TAP) Type of material coated: steel rod Max. usage: 1 gal/hr</p>	<p><u>Filters for spray booth</u> Manufacturer: Chemco Model: 2020 100 DP Dimension: 20 inch x 20 inch x 2 inch 20 total filters PM control efficiency: 90% or greater</p>
1152 ASSET NO.	<p>Rubber Glue-On Process</p> <ul style="list-style-type: none"> • Cleaning with Xylene, a TAP/HAP • Squirt on Tuff Tac glue cement, containing a TAP • Extruded Rubber cure oven Manufacturer: custom built Manufacture Date: 2005 Heat input rating: 500,000Btu/hr Fuel: natural gas 	None
???	<p>Finishing coating</p> <p><u>Diamond Vogel gloss black enamel dip tank</u> Manufacturer: custom built Manufacture Date: 2005Max. capacity/size: 576 gal Material: materials containing VOC, TAP, and HAP</p>	None

Emissions Inventories

Potential to Emit

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

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. The operation uncontrolled Potential to Emit is based upon a worst-case for operation of the facility of 8,760 hr/yr.

Table 2 UNCONTROLLED POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC
Source	T/yr	T/yr	T/yr	T/yr	T/yr
Residential boiler for heating hook line quench tank (Boiler)	0.00734	0.00058	0.09662	0.08116	0.00531
Pre-heat oven for the hook line (Gas Oven 1,750 deg. F)	0.41773	0.03298	5.49647	4.61704	0.30231
Draw furnace for the hook line (Gas Draw 750 deg. F)	0.08355	0.00660	1.09929	0.92341	0.06046
Extruded Rubber cure oven (Gas Oven 300 deg. F)	0.01632	0.00129	0.21471	0.18035	0.01181
Gas 0.62 dia. Rod Oven for the hook line	0.00373	0.00029	0.04902	0.04118	0.00270
Plastisol Process <ul style="list-style-type: none"> Electrically heated Plastisol cushion coating curing oven 	125 ¹				1.73
Xylene (HAP) <ul style="list-style-type: none"> Rubber glue-on process: Xylene to clean rods Rubber molding process: Xylene in Chemlok 252x (adhesive) 					20.64
Ethylbenzene (HAP) <ul style="list-style-type: none"> Rubber molding process: Ethylbenzene in Chemlok 252x (adhesive) 					1.83
Lead compounds (HAP) <ul style="list-style-type: none"> Rubber molding process: Lead compounds in Chemlok 252x (adhesive) 	0.61				
Toluene (HAP) <ul style="list-style-type: none"> Primer coating 					1.07
Heptane (TAP) <ul style="list-style-type: none"> Rubber glue-one process, in Tuff Tac glue cement 					24.24
Ethylene glycol or 2-Butoxyethanol (TAP) <ul style="list-style-type: none"> Finishing coating with Diamond Vogel gloss black enamel 					4.06
Secondary Butanol or Sec-Butyl alcohol (TAP)					1.02

	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC
<ul style="list-style-type: none"> Finishing coating with Diamond Vogel gloss black enamel 					
2-Butanone or Methyl Ethyl Ketone (TAP) <ul style="list-style-type: none"> Primer coating 					11.81
Diacetone alcohol (TAP) <ul style="list-style-type: none"> Primer coating 					0.38
Cyclohexanone (TAP) <ul style="list-style-type: none"> Primer coating 					0.31
N-Butyl Alcohol or 1 Butanol (TAP) <ul style="list-style-type: none"> Primer coating 					0.15
Cobalt 2-ethylhexanoate (HAP) <ul style="list-style-type: none"> Finishing coating with Diamond Vogel gloss black enamel 					0.03
Carbon Black (TAP) <ul style="list-style-type: none"> Primer coating Rubber glue-one process, in Tuff Tac glue cement Rubber molding process: carbon black in Chemlok 252x (adhesive) Finishing coating with Diamond Vogel gloss black enamel 	> 1.29 ²				
Total	>127.4	0.04	6.96	5.84	67.66

¹ Permitted at 1.25 T/yr with an electrostatic precipitator (ESP) as a control device. Assume ESP control efficiency of 99%; the uncontrolled emissions are calculated as: (1.25 T/hr) / (1-99%) = 125 T/yr.

² The PM emissions from these processes are greater than carbon black emissions.

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. The operation uncontrolled Potential to Emit is based upon operation of 8,760/yr.

Table 3 UNCONTROLLED POTENTIAL TO EMIT FOR HAZARDOUS AIR POLLUTANTS

Hazardous Air Pollutants	PTE (T/yr)
Xylene	20.64
Ethylbenzene	1.83
Lead compounds	0.61
Toluene	1.07
Cobalt compound: Cobalt 2-ethylhexanoate	0.03
Total	24.18

Pre-Project Potential to Emit

Pre-project Potential to Emit is used to establish the change in emissions at a facility as a result of this project. This is an existing facility. The following emissions units have not been changed since the PTC was issued in 2006:

Hook Chain Process

- Pre-heat oven
- Draw furnace

Vinyl Plastisol Chain Coating Process/Plastisol Process

- Electrically heated Plastisol cushion coating curing oven

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 emissions units have been changed, added, or was not included in the PTC issued in 2006:

Hook Chain Process:

- Replaced and installed a new residential boiler for heating hook line quench tank
- Different solution in the hook line quench tank
- 0.62 Dia. rod oven for the hook line

Primer Coating

- Primer paint dip tank

Vinyl Plastisol Chain Coating Process/Plastisol Process

- Plastisol dip tank – material with different components

Rubber Molding Process

- Spray booth for spraying adhesives (Chemlok 252x)

Rubber Glue-On Process

- Cleaning with Xylene, a TAP/HAP
- Squirt on Tuff Tac glue cement, containing a TAP
- Extruded Rubber cure oven

Finishing Coating

- Diamond Vogel gloss black enamel dip tank

Table 4 POST PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC
Source	T/yr	T/yr	T/yr	T/yr	T/yr
Residential boiler for heating hook line quench tank (Boiler)	0.00734	0.00058	0.09662	0.08116	0.00531
Pre-heat oven for the hook line (Gas Oven 1,750 deg. F)	0.41773	0.03298	5.49647	4.61704	0.30231
Draw furnace for the hook line (Gas Draw 750 deg. F)	0.08355	0.00660	1.09929	0.92341	0.06046
Extruded Rubber cure oven (Gas Oven 300 deg. F)	0.01632	0.00129	0.21471	0.18035	0.01181
Gas 0.62 dia. Rod Oven for the hook line	0.00373	0.00029	0.04902	0.04118	0.00270
Plastisol Process • Electrically heated Plastisol cushion coating curing oven	1.25				75.8 T/yr, permitted x 0.42% VOC = 0.32 T/yr
Xylene (HAP) • Rubber glue-on process: Xylene to clean rods • Rubber molding process: Xylene in Chemlok 252x (adhesive)					0.87
Ethylbenzene (HAP) • Rubber molding process: Ethylbenzene in Chemlok 252x (adhesive)					0.17

	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC
Lead compounds (HAP) • Rubber molding process: Lead compounds in Chemlok 252x (adhesive)	0.05				
Toluene (HAP) • Primer coating					0.28
Heptane (TAP) • Rubber glue-one process, in Tuff Tac glue cement					14.94
Ethylene glycol or 2-Butoxyethanol (TAP) • Finishing coating with Diamond Vogel gloss black enamel					0.83
Secondary Butanol or Sec-Butyl alcohol (TAP) • Finishing coating with Diamond Vogel gloss black enamel					0.21
2-Butanone or Methyl Ethyl Ketone (TAP) • Primer coating					3.97
Diacetone alcohol (TAP) • Primer coating					0.10
Cyclohexanone (TAP) • Primer coating					0.08
N-Butyl Alcohol or 1 Butanol (TAP) • Primer coating					0.04
Cobalt 2-ethylhexanoate (HAP) • Finishing coating with Diamond Vogel gloss black enamel					0.007
Carbon Black (TAP) • Primer coating • Rubber glue-one process, in Tuff Tac glue cement • Rubber molding process: carbon black in Chemlok 252x (adhesive) • Finishing coating with Diamond Vogel gloss black enamel	0.20 (PM including carbon black)				
Total	2.04	0.042	6.96	5.84	22.20 (< 100 ¹)

¹ The permit limits the VOC emissions to be less than 100 T/yr.

Change in Potential to Emit

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

Table 5 CHANGES IN POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS²

	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC
Source	T/yr	T/yr	T/yr	T/yr	T/yr
Residential boiler for heating hook line quench tank (Boiler)	0.00734	0.00058	0.09662	0.08116	0.00531
Pre-heat oven for the hook line (Gas Oven 1,750 deg. F)	0	0	0	0	0
Draw furnace for the hook line (Gas Draw 750 deg. F)	0	0	0	0	0
Extruded Rubber cure oven (Gas Oven 300 deg. F)	0.01632	0.00129	0.21471	0.18035	0.01181

	PM ₁₀ /PM _{2.5}	SO ₂	NO _x	CO	VOC
Gas 0.62 dia. Rod Oven for the hook line	0.00373	0.00029	0.04902	0.04118	0.00270
Plastisol Process • Electrically heated Plastisol cushion coating curing oven	0				0
Xylene (HAP) • Rubber glue-on process: Xylene to clean rods • Rubber molding process: Xylene in Chemlok 252x (adhesive)					0.87
Ethylbenzene (HAP) • Rubber molding process: Ethylbenzene in Chemlok 252x (adhesive)					0.17
Lead compounds (HAP) • Rubber molding process: Lead compounds in Chemlok 252x (adhesive)	0.05				
Toluene (HAP) • Primer coating					0.28
Heptane (TAP) • Rubber glue-one process, in Tuff Tac glue cement					14.94
Ethylene glycol or 2-Butoxyethanol (TAP) • Finishing coating with Diamond Vogel gloss black enamel					0.83
Secondary Butanol or Sec-Butyl alcohol (TAP) • Finishing coating with Diamond Vogel gloss black enamel					0.21
2-Butanone or Methyl Ethyl Ketone (TAP) • Primer coating					3.97
Diacetone alcohol (TAP) • Primer coating					0.10
Cyclohexanone (TAP) • Primer coating					0.08
N-Butyl Alcohol or 1 Butanol (TAP) • Primer coating					0.04
Cobalt 2-ethylhexanoate (HAP) • Finishing coating with Diamond Vogel gloss black enamel					0.007
Carbon Black (TAP) • Primer coating • Rubber glue-one process, in Tuff Tac glue cement • Rubber molding process: carbon black in Chemlok 252x (adhesive) • Finishing coating with Diamond Vogel gloss black enamel	0.20 (PM including carbon black)				
Total	0.27	2.16E-03	0.36	0.30	21.52(< 100 ¹)

¹ The permit limits the VOC emissions to be less than 100 T/yr.

² The PTE from using the materials are calculated based on the permitted material monthly throughputs multiplying 12 month/yr.

Non-Carcinogenic TAP Emissions

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

Due to the often change of the chemical components in the materials, as requested by the applicant, the permit has limited the TAP emissions to be less than the respective emissions screen level (EL) and has established the monitoring and record keeping requirements to ensure the compliance.

Table 6 PRE- AND POST PROJECT POTENTIAL TO EMIT FOR NON-CARCINOGENIC TOXIC AIR POLLUTANTS ¹

Non-Carcinogenic Toxic Air Pollutants	Pre-Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Post Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic EL (lb/hr)
Xylene <ul style="list-style-type: none"> Rubber glue-on process: Xylene to clean rods Rubber molding process: Xylene in Chemlok 252x (adhesive) 	0	< EL	29
Ethylbenzene <ul style="list-style-type: none"> Rubber molding process: Ethylbenzene in Chemlok 252x (adhesive) 	0	< EL	29
Toluene (HAP) <ul style="list-style-type: none"> Primer coating 	0	< EL	25
Heptane (TAP) <ul style="list-style-type: none"> Rubber glue-one process, in Tuff Tac glue cement 	0	< EL	109
Ethylene glycol or 2-Butoxyethanol (TAP) <ul style="list-style-type: none"> Finishing coating with Diamond Vogel gloss black enamel 	0	< EL	8
Secondary Butanol or Sec-Butyl alcohol (TAP) <ul style="list-style-type: none"> Finishing coating with Diamond Vogel gloss black enamel 	0	< EL	20.3
2-Butanone or Methyl Ethyl Ketone (TAP) <ul style="list-style-type: none"> Primer coating 	0	< EL	39.3
Diacetone alcohol (TAP) <ul style="list-style-type: none"> Primer coating 	0	< EL	16
Cyclohexanone (TAP) <ul style="list-style-type: none"> Primer coating 	0	< EL	6.67
N-Butyl Alcohol or 1 Butanol (TAP) <ul style="list-style-type: none"> Primer coating 	0	< EL	10
Carbon Black (TAP) <ul style="list-style-type: none"> Primer coating Rubber glue-one process, in Tuff Tac glue cement Rubber molding process: carbon black in Chemlok 252x (adhesive) Finishing coating with Diamond Vogel gloss black enamel 	0	< EL	0.23

¹The TAP emissions increases from the new ovens are insignificant.

Carcinogenic TAP Emissions

The materials used in the processes do not have carcinogenic TAP. The carcinogenic TAP emissions increases from the new ovens are insignificant and way below the ELs.

Post Project HAP Emissions

A summary of the estimated PTE for HAP is provided in the following table.

Due to the often change of the chemical components in the materials, as requested by the applicant, the permit has limited the total combined HAP to less than 25 T/yr and a single HAP to less than 10 T/yr and has established the monitoring and record keeping requirements to ensure the compliance.

Table 7 HAZARDOUS AIR POLLUTANTS EMISSIONS POTENTIAL TO EMIT SUMMARY

Hazardous Air Pollutants	PTE (T/yr)
Xylene (HAP) <ul style="list-style-type: none"> Rubber glue-on process: Xylene to clean rods Rubber molding process: Xylene in Chemlok 252x (adhesive) 	< 10
Ethylbenzene (HAP) <ul style="list-style-type: none"> Rubber molding process: Ethylbenzene in Chemlok 252x (adhesive) 	< 10
Lead compounds (HAP) <ul style="list-style-type: none"> Rubber molding process: Lead compounds in Chemlok 252x (adhesive) 	< 10
Toluene (HAP) <ul style="list-style-type: none"> Primer coating 	< 10
Cobalt 2-ethylhexanoate (HAP) <ul style="list-style-type: none"> Finishing coating with Diamond Vogel gloss black enamel List the HAP here 	< 10
Totals	< 25

Ambient Air Quality Impact Analyses

Modeling for criteria pollutants is not required because the emissions are below the modeling thresholds. Modeling is not required for TAP compliance because the permit limits the TAP emissions below TAP ELs.

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}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Facility Classification

The facility classification codes are as follows:

For THAPs (Total Hazardous Air Pollutants) Only:

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

For All Other Pollutants:

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

- B = Actual and potential emissions are < 100 T/yr without permit restrictions.
 UNK = Class is unknown.

Table 8 REGULATED AIR POLLUTANT FACILITY CLASSIFICATION

Pollutant	Uncontrolled PTE (T/yr)	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM	> 100	< 100	100	SM
PM ₁₀ /PM _{2.5}	> 100	< 100	100	SM
SO ₂	< 100	< 100	100	B
NO _x	< 100	< 100	100	B
CO	< 100	< 100	100	B
VOC	< 100	< 100	100	B
HAP (single)	> 10	< 10	10	SM
HAP (Total)	< 25	< 25	25	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 to include the current operations at the facility and to provide operation flexibilities. 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 and 10 tons per year for any one HAP or 25 tons per year for any combined HAP 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/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 60.

The facility is not subject to 40 CFR Part 60, Subpart VVV—Standards of Performance for Polymeric Coating of Supporting Substrates Facilities because the vinyl plastisol coating process does not meet the definition of *coating*

operation, polymeric coating of supporting substrates, and web coating under 40 CFR 60.741.

NESHAP Applicability (40 CFR 61)

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

MACT Applicability (40 CFR 63)

The facility is not subject to any MACT standards in 40 CFR Part 63.

Permit Conditions (PC) Review

This section describes those permit conditions that have been added, revised, modified or deleted as a result of this permitting action. The new text is in bold. The deleted text is in strikethrough.

Section 1 Permit Scope

Permit Conditions 1.1 to 1.3

Permit Condition 1.1 states the purpose of this permitting action. PC 1.3 states that the existing PTC issued in 2006 will be replaced by this revised PTC.

Table 1.1

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

Section 2 Facility-Wide Permit Conditions

This is a new section.

New Permit Conditions 2.1 and 2.2

PC 2.1 describes the processes of the facility. PC 2.2 describes the control devices of the facility.

New Permit Condition 2.3

This is an opacity emissions limit.

New Permit Conditions 2.4, 2.5, and 2.6

To give operational flexibilities and to keep the facility from becoming a major source for HAP, PC 2.4 limits the emissions of any single HAP from the entire facility less than 10 tons per year and the emissions of any combination of HAP from the entire facility less than 25 tons per year.

To give operational flexibilities and to keep the facility from becoming a major source for VOC, PC 2.5 limits the emissions of VOC from the entire facility less than 100 tons per year.

To give operational flexibilities and to ensure compliance with the TAP standards without involving dispersion modeling, PC 2.6 states that TAP increments shall not exceed the respective screening emissions levels (EL) as specified in IDAPA 58.01.01.585 and 586.

Currently, the operation does not emit TAP listed in IDAPA 58.01.01.586.

New Permit Condition 2.7

The applicant has stated that daily material usage monitoring is difficult and that the monthly monitoring is more practice. Therefore, for TAP compliance, monthly material usage limits are established using the 2015 maximum usage of each material provided by the applicant on 5/10/2016 with a safety factor of 1.5. It is then assumed that the permitted monthly amount would be used up in a day. All calculated TAP emissions using the permitted monthly usage limits are below the product of the respective ELs in lb/hr and 24 hr/day.

- For each TAP that is not emitted as particulate matter:

$$\text{Daily TAP}_j \text{ emissions} = \text{Monthly individual TAP}_j = \sum(Q_i \times D_i \times \text{TAP}_i \%)_j \text{ need to be } < (\text{EL lb/hr})_j \times (24 \text{ hr/day})$$

Where,

i: each material.
Q_i each material used in a month, gal
D_i density of each material, lb/gal
TAP_i% weight percentage TAP_{*j*} in each material. When a TAP content range provided in the SDS, use the higher value of the range
j an individual TAP

- For black carbon or TAP emitted as particulate matter:

Daily black carbon emissions = $\sum[(\text{monthly material usage, gal/month}) (\text{material density, lb/gal}) (\% \text{ of black carbon in the material}) (1 - \text{material transfer efficiency}\%)(1 - \text{control efficiency}\%)]_i < (\text{EL lb/hr}) \times (24 \text{ hr/day})$

90% material transfer efficiency is assumed for dip tanks, 30% material transfer efficiency is assumed for squirting Tuff Tac glue cement and spraying Chemlok 252x adhesive. 90% control efficiency is assumed because squirting Tuff Tac glue cement is required to be done inside the enclosed building. Spray booth filters have a control efficiency of 90% or greater.

For the current operations in the application, the facility will be able to comply with HAP and TAP standards as long as the facility complies with the monthly material usage limits in PC 2.7.

New Permit Condition 2.8

Applying Tuff Tac glue cement for the rubber glue-on process is required to be performed inside an enclosed building so that 90% control efficiency can be used to ensure compliance with the black carbon EL.

New Permit Condition 2.9

The permittee is required to keep all VOC product containers covered/closed when not in use. This PC is more in line with General Provisions No. 5.2. VOC in the materials are assumed to emit to the air in the EI calculation. No control credit is taken as a result of covering material containers in the EI calculation.

New Permit Condition 2.10

Permit Condition 2.10 is a monitoring and recordkeeping requirement. It requires recording and maintaining monthly material usages and material Safety Data Sheet (SDS).

New Permit Condition 2.11

PC 2.11 states that if the permittee only uses the materials listed in Table 2.1 and uses plastisol coating materials with VOC content of 0.42 wt% or less, no additional monitoring is required except for the monitoring requirements in PC 2.10.

New Permit Condition 2.12

PC 2.12 only applies when the facility uses materials not listed in Table 2.1 and containing HAP, TAP, and/or VOC, or use the plastisol coating materials with VOC content greater than 0.42 wt%. PC 2.12 is for demonstrating compliance with the HAP, VOC, and TAP emissions limits in PCs 2.4, 2.5, and 2.6.

Section 3 Vinyl Plastisol Chain Coating

This was section 2 in the 2006 PTC.

Permit Condition 3.1

According to the process description provided by the applicant, “Bare chain links” in PC 3.1 is changed to “**Primer coated chain links**”.

Permit Condition 3.4 and Table 3.2

According to the applicant, the material used now (and for the last twenty years) does not have lead in it. PC 3.4 is

revised to remove the lead emissions limit of 0 lb/hr and 0 T/yr. “No lead shall be emitted from the electrically heated curing oven for curing plastisol cushion coating” is added in PC 3.4. In addition, the footnotes for Table 3.2 are new and are taken from the current PTC template.

Table 3.2. Vinyl Plastisol Chain Coating Emissions Limits

Source Description	PM		Lead	
	lb/hr ^(b)	T/yr ^(c)	lb/hr ^(b)	T/yr ^(c)
Electrically heated Plastisol cushion coating curing oven	1.5	1.25	0	0

- a In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and record keeping requirements.
- b Pounds per hour, as determined by a test method prescribed by IDAPA 58.01.01.157, EPA reference test method, continuous emission monitoring system (CEMS) data, or DEQ-approved alternative.
- c Tons per any consecutive 12-calendar month period.

Permit Condition 3.5

It is revised for clarification purpose:

“For vinyl plastisol chain coating process, no more than 94.2 pounds per hour or 75.8 tons per year of any coating material, or combination of coating materials, shall be processed.”

No changes are made to the throughput limits as the applicant has requested to keep them as they were.

Permit Condition 3.6

The operation hour limit is removed as emissions are limited by the throughput limits. The new content for PC 3.6 is as follows:

“3.6 Lead in Coating Materials

Any coating material or combination of coating materials used for vinyl plastisol chain coating process shall not contain lead as demonstrated by the SDS required in Material Usage and Information Monitoring Permit Condition. (i.e., PC 2.10)

~~Hours of Operation~~

~~Hours of operation shall not exceed 1,672 hours per year.”~~

Old Permit Condition 2.7

As requested by the applicant, PC 2.7 in the 2006 PTC is removed. The Air Rules allow TAP/HAP emissions as long as the emissions meet the regulatory standards. The new PCs 2.4 to 2.6 and PCs 2.10 to 2.12 have given the flexibilities that the applicant requested.

~~“2.7—Coating Material Contents~~

~~No coating materials may be used which contain hazardous ingredients listed in their Material Safety Data Sheets using the definition of hazardous ingredients as those pollutants listed in IDAPA 58.01.01.585 and 586. Nor shall any coating material, or combination of coating materials, be used which emit toxic pollutants in such quantities or concentration as to alone, or in combination with other contaminants, injure or unreasonably affect human or animal life or vegetation as specified in IDAPA 58.01.01.161 (Rules and Regulations for the Control of Air Pollution in Idaho).”~~

Old Permit Condition 2.8

PC 2.8 in the 2006 PTC is removed as it is covered by new PCs 2.4 to 2.6 and PCs 2.10 to 2.12.

~~2.8 Throughput Monitoring~~

~~The type and amount (in pounds) of coating material used per day shall be recorded and maintained on site for a period of two years and be made available to Department representatives upon request. Material Safety data Sheets for each raw product used shall also be maintained as part of this record.~~

New Permit Condition 3.7

PC 3.7 is an operating requirement. It requires the permittee to use ESP to control particulate emissions from the curing oven and to operate the ESP and its monitoring device(s) in accordance with manufacturer specifications.

Revised Permit condition 3.8

Permit Condition 3.8 is revised and read as follows:

“The permittee shall monitor and record the coating material usage monthly and add the monthly coating material usage to the previous consecutive 11-month coating material usage to demonstrate compliance with the Usage Limits Permit Condition (i.e., PC 3.5). All records shall remain on-site in accordance with Monitoring and Recordkeeping requirements under General Provisions.” (i.e., PC 5.10)

New Permit Condition 3.9

PC 3.9 requires the permittee to annual inspection ESP that is taken from the internal guidance on establishing permit conditions for ESP.

Old Permit Condition 2.9

Old PC 2.9 regarding operating hour monitoring is removed as a result of removing operating hour limit for the vinyl plastisol chain coating process.

Section 3 of the 2006 PTC

This section is removed as the process no longer uses the permitted materials. Should there are HAP/TAP/VOC emitted from the quenchant, Permit Conditions 2.10 to 2.12 under facility-wide permit condition section would be able to address the emissions.

Section 4 Rubber Molding Process

This is a new section for rubber molding process.

New Permit Conditions 4.1 and 4.2

PC 4.1 describes the process. PC 4.2 describes the control of the process.

New Permit Conditions 4.3 and 4.4

PCs 4.3 and 4.4 are operational requirements regarding using spray booth filters to control emissions from the spray booth.

The requirement of using the spray booth filters is for compliance with the carbon black EL. The PM emissions from this process are very low and way below the modeling thresholds for particular matters.

Section 5 General Provisions

General Provisions from the current PTC template replace the ones in the old 2006 PTC.

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 were no comments on the application and there was not a request for a public comment period on DEQ’s proposed action. Refer to the chronology for public comment opportunity dates.

APPENDIX A – EMISSIONS INVENTORIES

	A	B	C	D	F	H	I	J	K	L	M	N	P	Q	R	S	T	U
1									Table 3.	POTENTIAL TO EMIT FOR HAZARDOUS AIR POLLUTANTS								
2									Federal Hazardous Air Pollutants	PTE	PTE with only monthly throughput limit							
3										(T/yr)								
4									Xylene	0.87								
5									Ethylbenzene	0.17								
6									Lead compounds	0.06								
7									Toluene	0.28								
8									Cobalt compound: Cobalt 2- ethylhexanoate in Diamond Vogel gloss black enamel	0.007								
9									Total	1.38								
10																		
11																		
12																		
13																		
14																		
15												assume all vocs to air						
16																		
17	HAP CALCULATION				Proposed future	Proposed future	Density of Compound	% of Source by Weight	HAP's	Density, lb/gal for each chemical	Density, lb/gal for compound	PTE Emission Factor	Future PTE, tons/ year	Uncontrolled PTE, tons/year	To be permitted gal/yr = to be permitted gal/month * 12			
18	Process	Method of Application	Source	% volatile by weight	gallons of source/year	hours of source / year	lb/gal											
19	Rubber Glue-On Operation	wipe before glue on	xylene		16	40	7.26	100.00%	xylene to clean rods	7.26	7.26	1	0.13	12.72	36			
20	Molded Rubber Operation	spray	Chemlok 252 glue	6.24 lb/gal for whole compound	155	440	7.9	65.00%	xylene in chemlok 252 glue	7.26	7.90	1	0.74	7.92	288			
21	Molded Rubber Operation	spray	Chemlok 252 glue		155	440	7.9	15.00%	ethylbenzene in chemlok 252 glue	7.21	7.90	1	0.17	1.83	288			
22	Molded Rubber Operation	spray	Chemlok 252 glue		155	440	7.9	5.00%	inorganic lead salt in chemlok 252 glue	8.34	7.90	1	0.06	0.61	288			
23	Prime before Plastisol or Rubber Glue On Operations	dip	Lakeside vinyl primer	<2% for whole primer	237.5	1000	7.36	14.00%	Toluene in Primer	7.22	7.36	1	0.28	1.07	540			
24	In assembly building, belt links are riveted to rubber belting. If the links are plain links with no coating, then the whole belt is dipped into black paint	dip	Diamond Vogel gloss black enamel		330	600	8.43	0.16%	Cobalt compound: Cobalt 2- ethylhexanoate in Diamond Vogel gloss black enamel		8.43	1	0.007	0.03	990			
25												Total	1.38	24.19				
26																		

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ																
1	PTE for Criteria Pollutants																																																										
2	Emission Factors																																																										
3	1070 lb/yr		from AP-42																																																								
4	365 x 24	8760 hours/yr																																																									
5	Small Boilers <100 million Btu's																																																										
6				uncontrolled				100																																																			
7				controlled low NOx burners				50																																																			
8				controlled low NOx burners & five acq recirculation				32																																																			
9																																																											
10																																																											
11								8760 lb/yr																																																			
12	Boiler		x	uncontrolled	lb/hr			0.02205882																																																			
13	215,000 Btu/hr				tons/year			0.09661765																																																			
14	Heats Hook Chain Process Quench Tank				maximum actual (1,000 hr/year)			0.01102941																																																			
15	1,000 hr use/year				controlled low NOx burners			0.01102941																																																			
16					tons/year			0.04830882																																																			
17					lb/hr			0.01852942																																																			
18					controlled low NOx burners & five acq			0.00705882																																																			
19					tons/year			0.03991765																																																			
20	ovens have large drop fans to remove heat																																																										
21																																																											
22	Natural gas Draw Furnace Oven #1		x	uncontrolled	lb/hr			1.254902																																																			
23	1750 degrees F				tons/year			5.494671																																																			
24	Hook Chain Process				maximum actual (1000 hr/year)			0.02245008																																																			
25	Steel is heated here prior to forming fixture and quench tank				controlled low NOx burners			0.02245008																																																			
26	12,800,000 Btu/hr				tons/year			2.74823529																																																			
27	14 burners				lb/hr			1.05411647																																																			
28	1,000 hr use/year				controlled low NOx burners & five acq			0.40158883																																																			
29					tons/year			1.73881959																																																			
30																																																											
31																																																											
32	Gas Draw Furnace #2		x	uncontrolled	lb/hr			0.25098039																																																			
33	750 degrees F				tons/year			1.09929432																																																			
34	Hook Chain Process				maximum actual (1000 hr/year)			0.1254902																																																			
35	After quench tank steel goes here				controlled low NOx burners			0.1254902																																																			
36	2,560,000 Btu/hr				tons/year			0.54947059																																																			
37	8 burners				lb/hr			0.210823529																																																			
38	1,000 hr use/year				controlled low NOx burners & five acq			0.08033373																																																			
39					tons/year			0.35377412																																																			
40																																																											
41	0.62 dia. Rod Oven				uncontrolled	lb/hr		0.04903961																																																			
42	6 gas burners				tons/year			0.21470588																																																			
43	4 Hrs				maximum actual (300 hr/year)			0.02450																																																			

	Amount of Product, Gal/month * 12 month/yr		Density, lb/gal	VOC%	Solid %	material transfer eff. %	Control eff. %	T/yr PM10/2.5 controlled
Tuff Tac glue	5400	squirt inside extruded rubber coating	5.95	0.93	0.07	30%	90%	0.08
Chemlok Glue	288	spray in spray booth	7.9	0.8	0.2	30%	98%	0.00
Lakeside Primer	540	dip tank	7.36	0.88	0.12	90%	0%	0.02
Diamond Vogel Black Paint	990	dip tank	8.43	0.7748	0.2252	90%	0%	0.09
total								0.20

PM except for Plastisol oven

APPENDIX B – FACILITY DRAFT COMMENTS

The following comments were received from the facility on May 10 and June 1, 2016:

Facility Comment: The max. usage in the draft permit doesn't work for us. We basically make to order. We do not evenly use each production line throughout the year. Some months are very heavy and others are very light. How can we rephrase this.

Product	2015 monthly use	2015 yearly use
Tuff Tac	0 to 300	1,555
Xylene	.5 to 2	13.5
Diamond	0 to 55	330
Chemlok	0 to 16	110
Lakeside	0 to 30	211
Methy	0 to 45	290

DEQ Response: The monthly material usages have been increased using 2015 monthly maximum usages with a safety factor of 1.5. All calculations are revised based on the new increased monthly limits; though the emissions still meet all the standards, the Heptane emissions are now 95% of its EL.

Facility Comment: (comment on PC 3.9 in the draft permit regarding ESP operating parameter monitoring) this is already in place on the original smog Hog. The input to the high voltage power pak must always be 115 volts, 60 cycle, 1 phase. The Power pack supplies nominal 11,000 volts DC to the ionizer wires and 5,500 volts DC to the collection cells through internal high voltage wires and insulated contactors. The indicator lights on the individual modular junction boxes are lit when the power is on and the secondary side of the high voltage power pak is energized. If any of the lights fail to glow when power is turned on, the system is not working correctly. The electrical circuit is designed around the POWER PAK which contains the necessary components to convert 115 volt, 60 cycle AC to the high voltage DC required for the ionizer and collecting cell. The normal current in the secondary (high voltage) winding is about 2 milliamperes and a maximum of about 3 milliamperes. In the event of a short circuit the Power Pak is so designed to cause the voltage to collapse. When the voltage collapses the indicating light will not glow. The Power Pak is thus self-protecting against overloads and automatically compensates for line voltage variations.

The collecting section consisting of plates alternately at ground potential and charged to a positive voltage of 5.5 KV. The charged particles are attracted and collected on the grounded plates.

As far as I can tell, this is already installed, pre calibrated, and in operation. The monitoring device is the light.

DEQ Response: base on the information provided above, PC 3.7 is revised, and PC 3.9 in the draft permit is removed.

APPENDIX C – PROCESSING FEE

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	0.4	0	0.4
SO ₂	2.2E-03	0	2.2E-03
CO	0.3	0	0.3
PM10	0.28	0	0.3
VOC	21.5	0	21.5
TAPS/HAPS ¹	0.0	0	0.0
Total:	0.0	0	22.5
Fee Due	\$ 5,000.00		

Comments:

¹ HAP/TAP have counted as VOC.