


Statement of Basis
Automotive Coating Operations General Permit
Final

Rob Green Body Shop
Twin Falls, Idaho
Facility ID No. 083-00128
Permit to Construct P-2011.0007
Project No. 60704

January 26, 2011
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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

AQCR	Air Quality Control Region
Btu	British thermal units
CAS No.	Chemical Abstracts Service registry number
CE	control efficiency
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
gal/day	gallons per calendar day
gal/hr	gallons per hour
gal/yr	gallons per consecutive 12 calendar month period
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hr/yr	hours per year
HVLP	high volume, low pressure (applies to paint spray guns)
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/gal	pounds per gallon
lb/hr	pounds per hour
LPG	Liquefied Petroleum Gas
MMBtu	million British thermal units
MSDS	Material Safety Data Sheets
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
PC	permit condition
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SIC	Standard Industrial Classification
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/yr	tons per consecutive 12-calendar month period
T2	Tier II operating permit
TAP	toxic air pollutants
TE	transfer efficiency
UTM	Universal Transverse Mercator
VOC	volatile organic compounds

FACILITY INFORMATION

Description

Rob Green Body Shop is an auto body repair and refinishing facility with paint spray booths which are equipped with a paint spray booth heater. The paint booths are pressurized downdraft booths with glass fiber filtration media for control of particulate emissions. Drying and paint curing is done in the paint booths. The paint spray booths are equipped with a natural gas-fired burner to heat the paint spray booths. The process includes application of coatings via a HVLP (or equivalent with at least 65% transfer efficiency) paint spray guns.

Permitting History

This is the initial PTC for an existing facility that was constructed in January 1994, thus there is no permitting history.

Application Scope

This is the initial PTC for an existing facility that was constructed in January 1994.

Application Chronology

December 23, 2010	DEQ received an application and a \$1,500 application and processing fee.
January 5, 2011	DEQ made available the draft permit and statement of basis for peer review.
January 5, 2011	DEQ determined that the application was complete.
January 10 – 25, 2011	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
January 26, 2011	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

The facility utilizes glass fiber filtration media for control of particulate matter emissions from the automotive coating operation. In addition, HVLP paint guns (or equivalent) are used to minimize PM₁₀ and VOC emissions from painting. The HVLP (or equivalent) spray equipment will control PM₁₀ and VOC emissions by having more paint transfer to the desired surfaces than traditional painting equipment.

Emissions Units and Control Devices

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION

Source Descriptions	Control Equipment Descriptions	Emissions Point Description
<p><u>Paint spray booths</u></p> <p>Manufacturer: SAICO or equivalent</p> <p>Note: The number of booths installed at the facility is not limited by this permit.</p> <p><u>Paint spray booth heater(s)</u></p> <p>Manufacturer: Power Flame or equivalent</p> <p>Heat input capacity: up to 10.0 MMBtu/hr</p> <p>Fuel: natural gas only</p>	<p><u>Paint spray booths and preparation station filter systems</u></p> <p>Booth type: Down draft</p> <p>Manufacturers: SAICO, Team Blowtherm, or equivalent</p> <p>Particulate filtration method: Dry filters or equivalent</p> <p>Filter Manufacturers: Viledon GA26, Viledon PA241, Viledon PA281, or equivalent</p> <p>PM/PM₁₀ control efficiency: 98% or greater</p> <p><u>Coating spray guns</u></p> <p>Manufacturer: IWATA, SATA, 3M, or equivalent</p> <p>Model: IWATA W400, IWATA LPH400, SATA NR2000, 3M HG09, or equivalent</p> <p>Type: HVLP or equivalent</p> <p>Transfer efficiency: 65% or greater</p>	<p>Paint spray booth exhaust stacks and preparation station exhaust stacks</p>

Emissions Inventories

An emission inventory was developed for the automotive coating operation associated with this proposed project (see Appendix A for a detailed discussion). Emissions estimates of criteria pollutant PTE were based on the worst-case VOC and PM₁₀ content for coatings as taken from the DEQ Automotive Coating EI spreadsheet (see the DEQ website). Uncontrolled emissions were based upon scaling the annual controlled PTE (based upon the daily coating use limit and typical operation of 2,080 hr/yr) up to an uncontrolled annual PTE based upon operation of 8,760 hr/yr.

Uncontrolled Emissions:

The following table presents the post project uncontrolled emissions for criteria 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 annual emissions were calculated by scaling up the coating operation from normal business annual operations of 2,080 hrs/yr (8 hrs/day x 260 days/yr, normal business hours) to uncontrolled annual operation of 8,760 hrs/yr (24 hrs/day x 365 days/yr).

Table 2 POST PROJECT UNCONTROLLED EMISSIONS FOR CRITERIA POLLUTANTS

Emissions Unit	PM ₁₀	SO ₂	NO _x	CO	VOC	Lead
	T/yr	T/yr	T/yr	T/yr	T/yr	lb/quarter
Point Sources						
Paint spray booths and preparation stations	18.84	0.0	0.0	0.0	51.56	0.0
Paint spray booth heater(s) ^a	0.36	0.03	4.08	1.76	0.27	0.012
Total, Point Sources	19.20	0.03	4.08	1.76	51.83	0.012

a) Estimates provided in this summary table are for a heater with a heat input capacity of 10 MMBtu/hr, while the proposed heater is of lesser capacity.

As demonstrated in Table 2, the facility has an uncontrolled potential to emit for PM₁₀, SO₂, NO_x, CO, and VOC emissions less than the major source threshold of 100 T/yr. Therefore, this facility is not designated as a Synthetic Minor facility. As demonstrated in Table 3 as follows the facility's PTE for all criteria pollutants is less than 80% of the Major Source thresholds of 100 T/yr. Therefore, this facility will not be designated as a SM-80 facility.

This is an existing facility. However, since this is the first time the facility is receiving a permit, pre-project emissions are set to zero for all criteria pollutants.

Post Project Potential to Emit

The following table presents the post project potential to emit for criteria 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 3 POST PROJECT POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS

Emissions Unit	PM ₁₀		SO ₂		NO _x		CO		VOC		Lead	
	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	lb/hr	T/yr
Point Sources												
Paint spray booths and preparation stations	0.03	0.14	0.000	0.000	0.00	0.00	0.00	0.00	2.80	12.27	0	0
Paint booth heater(s)	0.08	0.09	0.006	0.03	0.93	0.97	0.40	0.42	0.06	0.07	0.000005	0.000006
Post-Project Totals	0.11	0.23	0.01	0.03	0.93	0.97	0.40	0.42	2.86	12.34	0.000005	0.000006

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.

c) Estimates provided in this summary table are for a heater with a heat input capacity of 10 MMBtu/hr, while the proposed heater is of lesser capacity.

As demonstrated in Tables 2 and 3, this facility has an uncontrolled potential to emit for all criteria pollutant emissions less than the Major Source threshold of 100 T/yr and a controlled potential to emit for all criteria pollutant emissions less than the Major Source threshold of 100 T/yr. Therefore, this facility is designated as a Minor facility. As demonstrated in Table 3 the facility's PTE for all criteria pollutants is less than 80% of the Major Source thresholds of 100 T/yr. Therefore, this facility will not be designated as a SM-80 facility.

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 or if emissions modeling may be required. The following table presents the facility-wide change in the potential to emit for criteria pollutants.

Table 4 CHANGES IN POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS

	PM ₁₀		SO ₂		NO _x		CO		VOC		Lead	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Point Sources												
Pre-Project Potential to Emit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Post Project Potential to Emit	0.11	0.23	0.01	0.03	0.93	0.97	0.40	0.42	2.86	12.34	0.000005	0.000006
Changes in Potential to Emit	0.11	0.23	0.01	0.03	0.93	0.97	0.40	0.42	2.86	12.34	0.000005	0.000006

Because of the daily coating material use limits imposed by DEQ, and agreed to by the facility in applying for this Automotive Coating “General Permit”, no EL specified in IDAPA 58.01.01.585 or 586 are expected to be exceeded by the facility (see Appendix A). In addition, because daily coating use is limited to 4.0 gal/day facility-wide HAP emissions are inherently limited to less than 10 T/yr for any one HAP and 25 T/yr for all combined HAP (see Appendix A).

Ambient Air Quality Impact Analyses

Because of the daily coating material use limits imposed by DEQ, and agreed to by the facility in applying for this Automotive Coating “General Permit”, it needs to be determined if the PTE for the automotive coating operation exceeds the DEQ modeling guideline thresholds. The following table compares the post-project facility-wide annual emissions to the DEQ modeling guideline thresholds (per the State of Idaho Air Quality Modeling Guideline, 12/31/2002).

Table 5 PTE FOR CRITERIA POLLUTANTS COMPARED TO THE DEQ MODELING GUIDELINE THRESHOLDS

Pollutant	PTE (T/yr) or lb/hr if listed	DEQ Modeling Guideline Thresholds (T/yr) or lb/hr if listed	Exceeds Modeling Guideline Threshold?
PM ₁₀	0.23 or 0.11 lb/hr	1 or 0.2 lb/hr	No
SO ₂	0.03	1	No
NO _x	0.97	1	No
CO	0.40 lb/hr	14 lb/hr	No
Lead	6E-5 or 0.004 lb/mo	0.6 or 100 lb/month	No

Therefore, the installation of the automotive coating operation does not require criteria pollutant modeling.

As presented previously in the DEQ Automotive Coatings EI Spreadsheet (see the DEQ website) there are no TAP that required facility modeling for exceeding the pounds per hour screening levels provided in IDAPA 58.01.01.585 and .586. Therefore, the installation of a new automotive coating operation does not require TAP modeling.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

Rob Green Body Shop 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.

Permit to Construct (IDAPA 58.01.01.201)

An application was submitted requesting a permit to construct the proposed facility. Therefore, 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)

An application was submitted for a permit to construct, and an optional Tier II operating permit was not 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)

The emissions from the automotive coating process are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Condition 6.

Rules for the Control of Odors (IDAPA 58.01.01.775-776)

The facility is subject to the general restrictions for the control of odors from the facility. This requirement is assured by Permit Conditions 7 and 12.

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

IDAPA 58.01.01.006.118 defines a Tier I source as “any source located at a major facility as defined in Section 008.” IDAPA 58.01.01.008.10 defines a major facility as either:

- For HAP a facility with the potential to emit ten (10) tons per year (T/yr) or more of any hazardous air pollutant, other than radionuclides, or
- The facility emits or has the potential to emit twenty-five (25) T/yr or more of any combination of any hazardous air pollutants, other than radionuclides.

Uncontrolled HAP emissions were calculated by using the DEQ Automotive Coating EI spreadsheet (see the DEQ website) and setting paint use to 4.0 gallons per day (as limited by the permit). Then worst-case HAP emissions were determined for all paints listed in the spreadsheet. Then emissions were assumed to occur 8,760 hours per year as a worst-case assumption.

HAP emission estimates are provided in Appendix A to the Statement of Basis. The PTE for each individual HAP is less than 10 T/yr, and the PTE for all combined HAP is less than 25 T/yr. Therefore, this facility is not a HAP major source subject to Tier I permitting requirements.

The following table compares the post-project facility-wide annual PTE for all criteria pollutants emitted by the source to the applicable criteria pollutant major source thresholds in order to determine if the facility is a criteria pollutant major source.

Table 6 PTE FOR CRITERIA POLLUTANTS COMPARED TO THE CRITERIA POLLUTANT MAJOR SOURCE THRESHOLDS

Criteria Pollutants	PTE (T/yr)	Major Source Threshold (T/yr)	Exceeds the Major Source Threshold?
PM ₁₀	0.23	100	No
SO ₂	0.03	100	No
NO _x	0.97	100	No
CO	0.42	100	No
VOC	12.34	100	No

As presented in the preceding table, the PTE for each criteria pollutant is less than 100 T/yr. Therefore, this facility is not a criteria pollutant major source subject to Tier I permitting requirements.

PSD Classification (40 CFR 52.21)

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.

NSPS Applicability (40 CFR 60)

The facility is not subject to any NSPS requirements.

NESHAP Applicability (40 CFR 61)

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

MACT Applicability (40 CFR 63)

40 CFR 63, Subpart HHHHHH..... National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

40 CFR 63.11169 What is the purpose of this subpart?

In accordance with §63.11169, subpart HHHHHH establishes national emission standards for hazardous air pollutants (HAP) for area sources involved in auto body refinishing operations that encompass motor vehicle and mobile equipment spray-applied surface coating operations.

40 CFR 63.11170 Am I subject to this subpart?

In accordance with §63.11170(a), this automotive coating operation is subject to this subpart because the facility will be operated as an area source of HAP. The facility is a source of HAP that is not a major source of HAP, is not located at a major source, and is not part of a major source of HAP emissions. In addition, the facility will perform one or more activities listed in this section, including spray application of coatings, as defined in §63.11180, to motor vehicles and mobile equipment including operations that are located in stationary structures at fixed locations.

40 CFR 63.11171 How do I know if my source is considered a new source or an existing source?

In accordance with §63.11171(b), the automotive coating operation is the collection of mixing rooms and equipment; spray booths, curing ovens, and associated equipment; spray guns and associated equipment; spray gun cleaning equipment; and equipment used for storage, handling, recovery, or recycling of cleaning solvent or waste paint. Paint stripping was not proposed as a business activity.

In accordance with §63.11171(c), this automotive coating operation is an existing source because it commenced construction prior to September 17, 2007, by installing new paint stripping or surface coating equipment, and the new surface coating equipment will be used at a source that was actively engaged in paint stripping and/or miscellaneous surface coating prior to September 17, 2007.

40 CFR 63.11172 When do I have to comply with this subpart?

In accordance with §63.11172(a)(2), because the initial startup of the facility occurred prior to January 9, 2008, the compliance date is January 10, 2011.

40 CFR 63.11173 What are my general requirements for complying with this subpart?

Because the facility has not proposed paint-stripping activities, the requirements of §63.11173(a) through (f) are not applicable. Because the facility is an automotive coating operation, in accordance with §63.11173(e), the permittee must meet the requirements in paragraphs (e)(1) through (e)(5) of this section.

In accordance with §63.11173(f), each owner or operator of an affected automotive coating operation must ensure and certify that all new and existing personnel, including contract personnel, who spray apply surface coatings, as defined in §63.11180, are trained in the proper application of surface coatings as required by paragraph (e)(1) of this section. The training program must include, at a minimum, the items listed in paragraphs (f)(1) through (f)(3) of this section.

In accordance with §63.11173(g), as required by paragraph (e)(1) of this section, all new and existing personnel at an affected motor vehicle and mobile equipment or miscellaneous surface coating source, including contract personnel, who spray apply surface coatings, as defined in §63.11180, must be trained by the dates specified in paragraphs (g)(1) and (2) of this section. Employees who transfer within a company to a position as a painter are subject to the same requirements as a new hire.

Compliance with these requirements is assured by Permit Condition 16.

40 CFR 63.11174 What parts of the General Provisions apply to me?

In accordance with §63.11174(a), Table 1 of this subpart shows which parts of the general provisions in Subpart A apply. Compliance with these requirements is assured by Permit Condition 16.

In accordance with §63.11174(b), an owner or operator of an area source subject to this subpart is exempt from the obligation to obtain a permit under 40 CFR part 70 or 71 provided that a permit under 40 CFR 70.3(a) or 71.3(a) is not required for a reason other than becoming area source subject to this subpart. This permit application and permitting action involve a permit to construct, and will not utilize the requirements and procedures in IDAPA 58.01.01.300-399 for the issuance of Tier I operating permits.

40 CFR 63.11175 What notifications must I submit?

In accordance with §63.11175(a), because the facility is a surface coating operation subject to this subpart, the initial notification required by §63.9(b) must be submitted. For this existing operation, the initial notification must be submitted no later than on or before March 11, 2011.

In accordance with §63.11175(b), because the facility is an existing source, the permittee is not required to submit a separate notification of compliance status in addition to the initial notification specified in paragraph (a) of this subpart provided the permittee was able to certify compliance on the date of the initial notification, as part of the initial notification, and the permittee's compliance status has not since changed. The permittee must submit a notification of compliance status on or before March 11, 2011. The permittee is required to submit the information specified in paragraphs (b)(1) through (4) of this section with the notification of compliance status.

Compliance with these requirements is assured by Permit Condition 18.

40 CFR 63.11176 What reports must I submit?

In accordance with §63.11176(a), because the permittee is an owner or operator of a paint stripping, motor vehicle or mobile equipment, or miscellaneous surface coating affected source, the permittee is required to submit a report in each calendar year in which information previously submitted in either the initial notification required by §63.11175(a), notification of compliance, or a previous annual notification of changes report submitted under this paragraph, has changed. Deviations from the relevant requirements in §63.11173(a) through (d) or §63.11173(e) through (g) on the date of the report will be deemed to be a change. The annual notification of changes report must be submitted prior to March 1 of each calendar year when reportable changes have occurred and must include the information specified in paragraphs (a)(1) through (2) of this section.

Compliance with these requirements is assured by Permit Condition 19.

Because the facility has not proposed to conduct paint stripping operations, the MeCl minimization plan requirements are not applicable (see Permit Condition 9).

40 CFR 63.11177 What records must I keep?

In accordance with §63.11177, because the permittee is the owner or operator of a surface coating operation, the permittee must keep the records specified in paragraphs (a) through (d) and (g) of this section. Because the permittee has not proposed to conduct paint stripping operations, the requirements of paragraphs (e) and (f) of this section are not applicable. Compliance with these requirements is assured by Permit Condition 17.

40 CFR 63.11178 In what form and for how long must I keep my records?

In accordance with 40 CFR 63.11178(a) because the permittee is the owner or operator of an affected source, the permittee must maintain copies of the records specified in §63.11177 for a period of at least five years after the date of each record. Copies of records must be kept on site and in a printed or electronic form that is readily accessible for inspection for at least the first two years after their date, and may be kept off-site after that two year period. Compliance with these requirements is assured by Permit Condition 17.

40 CFR 63.11179 Who implements and enforces this subpart?

In accordance with §63.11179(a), this subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority. At the time of this permitting action, the EPA has not delegated authority to the State of Idaho. However, IDAPA 58.01.01.107.03.i incorporates by reference all Federal Clean Air Act requirements including 40 CFR 63, Subpart HHHHHH. Therefore, the requirements of this subpart have been placed in the permit.

40 CFR 63.11180 What definitions do I need to know?

Terms used in this subpart are defined in accordance with §63.11180.

Permit Conditions Review

This section describes the permit conditions for this initial permit.

Permit condition 1 establishes the permit to construct scope.

Permit condition 2 provides a description of the purpose of the permit and the regulated sources, the process, and the control devices used at the facility.

Permit condition 3 provides a process description of the facility.

Permit condition 4 provides a description of the control devices used at the facility.

Permit condition 5 establishes hourly and annual emissions limits for PM₁₀ and VOC emissions from the automotive coating operation.

As mentioned previously, Permit Condition 6 establishes a 20% opacity limit for the paint booth stacks, vents, or functionally equivalent openings associated with the automotive coating operation.

As mentioned previously, Permit Condition 7 establishes that the permittee shall not allow, suffer, cause, or permit the emission of odorous gasses, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

Permit Condition 8 establishes that only natural gas is allowed to be used as fuel in the paint spray booth heater as proposed by the applicant.

Permit condition 9 establishes that the facility will not use MeCl to remove paint from vehicles at the facility. This was done because MeCl was not proposed by the applicant to be used at this facility and the emissions were not included in the DEQ Automotive Coating EI Spreadsheet (see the DEQ website). In addition, Subpart HHHHHH has additional requirements for facilities that use MeCl to remove paint as mentioned previously in the discussion of Subpart HHHHHH in the MACT Applicability Section.

Permit condition 10 establishes a daily use limit for all coating materials used in the automotive coating process as proposed by the applicant. This limit was established because it was the easiest way for the Applicant to demonstrate compliance with the PM₁₀ and VOC emissions limit specified in permit condition 5 and the TAP emissions estimates specified in the DEQ Automotive Coating EI Spreadsheet (see the DEQ website).

Permit condition 11 establishes that the permittee conduct all automotive coating operations in the paint booth or preparation station with the filters in place, exhaust fan(s) operating, and door(s) or curtain(s) closed, that the operation shall use a HVLP spray gun, and that the permittee shall maintain and operate the paint booth and preparation station exhaust filter systems in accordance with the manufacturer's specifications. This condition also defines what a booth and preparation station used for applying coating is.

Permit condition 12 establishes that the permittee shall maintain records of all odor complaints received, perform appropriate corrective actions, and maintain records of corrective actions taken at the facility for the automotive coating process. This was required because automotive operation operations are expected to have odors that might be offensive to their immediate neighbors.

Permit condition 13 establishes that the permittee shall maintain material purchase records and Material Safety Data Sheets (MSDS) for the automotive coating process. This condition was placed in the permit to ensure compliance with the Coating Materials Use Limit Permit Condition.

Permit condition 14 establishes that the permittee shall maintain daily usage records of pre-treatment wash primers, primers, topcoats, clear coats, and thinners/reducers materials used for the automotive coating process. This condition was placed in the permit to ensure compliance with the Coating Materials Use Limit permit condition.

Permit condition 15 establishes that the permittee shall maintain records as required by the General Provision recordkeeping requirements.

Permit condition 16 establishes parameters that will allow the facility to comply with the general operating requirements of 40 CFR 63, Subpart HHHHHH – MACT Standards and Management Practices for Paint Stripping and Miscellaneous Coating Operations unless the facility is exempt from HHHHHH.

Permit condition 17 establishes parameters that will allow the facility to comply with the monitoring and recordkeeping requirements of 40 CFR 63, Subpart HHHHHH – MACT Standards and Management Practices for Paint Stripping and Miscellaneous Coating Operations unless the facility is exempt from HHHHHH.

Permit condition 18 establishes parameters that will allow the facility to comply with the initial notification and reporting requirements of 40 CFR 63, Subpart HHHHHH – MACT Standards and Management Practices for Paint Stripping and Miscellaneous Coating Operations unless the facility is exempt from HHHHHH.

Permit condition 19 establishes parameters that will allow the facility to comply with the annual notification and reporting requirements of 40 CFR 63, Subpart HHHHHH – MACT Standards and Management Practices for Paint Stripping and Miscellaneous Coating Operations unless the facility is exempt from HHHHHH.

Permit condition 20 establishes that the federal requirements of 40 CFR Part 63 are incorporated by reference into the requirements of this permit per current DEQ guidance.

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c or IDAPA 58.01.01.404.01.c. During this time, there were no comments on the application and there was not a request for a public comment period on DEQ's proposed action. Refer to the chronology for public comment opportunity dates.

APPENDIX A – EMISSION INVENTORIES

Coating Operation Emissions Calculations:

A daily coatings material use limit was established for Automotive Coating operations to demonstrate compliance with state law. Specifically, compliance with IDAPA 58.01.01.585 and .586 for toxic air pollutants (TAP) needs to be determined. Therefore, DEQ staff created the DEQ Automotive Coating EI spreadsheet (see the DEQ website). This spreadsheet contains paints from two different manufacturers of paints used in the automotive coating industry and multiple paint systems for each brand. The paint brands chosen were based upon discussions with a national paint distributor with several stores throughout the state of Idaho. The TAP data entered in the spreadsheet was taken from the MSDS for the paints listed. Included in the calculations was a safety factor of 19% since all paints available were not analyzed. With this safety factor it is reasonably presumed that the data represents all available automotive coatings. The spreadsheet was then used to demonstrate that with 4.0 gallons per day of coating use, the EL listed in IDAPA 58.01.01.585 and .586 would not be exceeded for any of the coatings listed in the spreadsheet. The 4.0 gallons per day of coating was then used to determine worst-case PM₁₀ and VOC emissions from Automotive Coating operations (see the calculations as follows):

Uncontrolled annual emissions were estimated by scaling up the coating operation from the 2,080 hr/yr (8 hr/day x 260 day/yr, normal business hours) to 8,760 hr/yr (24 hr/day x 365 day/yr). Therefore the scaling factor = $8,760 \text{ hr/yr} \div 2,080 \text{ hr/yr} = 4.2$.

Detailed emissions estimates from the spreadsheet are provided in the following pages.

Paint Booth Heater Emissions Calculations:

To determine worst-case emissions from the paint booth(s) heater(s) the maximum heat input rating of the burner was assumed to be 10 MMBtu/hr with operation of 2,080 hr/yr.

Uncontrolled annual emissions were again estimated by scaling up the operation of the burner from the 2,080 hr/yr (8 hr/day x 260 day/yr, normal business hours) to 8,760 hr/yr (24 hr/day x 365 day/yr).

Therefore the scaling factor = $8,760 \text{ hr/yr} \div 2,080 \text{ hr/yr} = 4.2$.

Detailed emissions estimates from the spreadsheet are provided in the following pages.

General PTC
Automotive Coating
PTE Emission Inventory - maximum TAP/HAP results of all coatings analyzed and including booth heater emissions

Criteria Air Pollutants	Booth Emissions	Heater Emissions	Combined Emissions	Booth Emissions	Heater Emissions	Combined Emissions	Modeling Threshold	Below Threshold?	Modeling Threshold	Below Threshold?
	lb/hr	lb/hr	lb/hr	T/yr	T/yr	T/yr			Case-by-Case	
NO ₂	0.00	0.93	0.93	0.00	0.97	0.97	2002 Guidance 1 T/yr	Yes	7 T/yr	Yes
CO	0.00	0.40	0.40	0.00	0.42	0.42	14 lb/hr	Yes	70 lb/hr	Yes
PM ₁₀	0.03	0.08	0.11	0.14	0.09	0.23	0.2 lb/hr	Yes	0.9 lb/hr	Yes
SO _x	0.000	0.006	0.006	0.000	0.030	0.03	1 T/yr	Yes	7 T/yr	Yes
VOC	2.80	0.06	2.86	12.27	0.07	12.34	0.2 lb/hr	Yes	0.9 lb/hr	Yes
Lead	0.0E+00	5.0E-06	5.0E-06	0.0E+00	6.0E-06	0.01	1 T/yr	Yes	7 T/yr	Yes
	lb/mo	lb/mo	lb/mo	T/yr			0.6 T/yr	Yes		
	0.000	0.004	0.004	0.000			10 lb/mo	Yes		

Note: 100 lb/mo Pb in guidance reduced by factor of 10 based on latest Pb NAAQS (reduced in 2008 from 1.5 ug/n³ to 0.15 ug/m³)

Hazardous Air Pollutants (HAP) and Toxic Air Pollutants (TAP)						
	Booth Emissions	Heater Emissions	Combined Emissions	Combined Emissions	Modeling Threshold	Below Threshold?
	lb/hr	lb/hr	lb/hr	T/yr	EL (lb/hr)	
Organic HAP PAH						
2-Methylnaphthalene	0.00E+00	5.59E-08	5.59E-08	5.81E-08	9.10E-05	Yes
3-Methylchloranthrene	0.00E+00	4.19E-09	4.19E-09	4.36E-09	2.50E-06	Yes
Acenaphthene	0.00E+00	4.19E-09	4.19E-09	4.36E-09	9.10E-05	Yes
Acenaphthylene	0.00E+00	4.19E-09	4.19E-09	4.36E-09	9.10E-05	Yes
Anthracene	0.00E+00	5.59E-09	5.59E-09	5.81E-09	9.10E-05	Yes
Benzo(a)anthracene	0.00E+00	4.19E-09	4.19E-09	4.36E-09	9.10E-05	See POM
Benzo(a)pyrene	0.00E+00	2.79E-09	2.79E-09	2.91E-09	2.00E-06	See POM
Benzo(b)fluoranthene	0.00E+00	4.19E-09	4.19E-09	4.36E-09		See POM
Benzo(g,h,i)perylene	0.00E+00	2.79E-09	2.79E-09	2.91E-09	9.10E-05	Yes
Benzo(k)fluoranthene	0.00E+00	4.19E-09	4.19E-09	4.36E-09		See POM
Chrysene	0.00E+00	4.19E-09	4.19E-09	4.36E-09		See POM
Dibenz(a,h)anthracene	0.00E+00	2.79E-09	2.79E-09	2.91E-09		See POM
Dichlorobenzene	0.00E+00	2.79E-06	2.79E-06	2.91E-06	9.10E-05	Yes
7,12-Dimethylbenz(a)anthracene	0.00E+00	1.57E-07	1.57E-07	1.63E-07	9.10E-05	Yes
Fluoranthene	0.00E+00	6.98E-09	6.98E-09	7.26E-09	9.10E-05	Yes
Fluorene	0.00E+00	6.52E-09	6.52E-09	6.78E-09	9.10E-05	Yes
Indeno(1,2,3-cd)pyrene	0.00E+00	4.19E-09	4.19E-09	4.36E-09		See POM
Phenanthrene	0.00E+00	3.96E-08	3.96E-08	4.12E-08	9.10E-05	Yes
Pyrene	0.00E+00	1.16E-08	1.16E-08	1.21E-08	9.10E-05	Yes
Polycyclic Organic Matter (POM, 7-F)	0.00E+00	2.65E-08	2.65E-08	2.76E-08	2.00E-06	Yes
Organic HAP Non-PAH						
Benzene	0.00E+00	4.89E-06	4.89E-06	5.08E-06	8.00E-04	Yes
Ethyl Benzene	1.40E-01	0.00E+00	1.40E-01	6.14E-01	2.90E+01	Yes
Hexamethylene Diisocyanate (HDI)	2.00E-03	0.00E+00	2.00E-03	8.74E-03	2.00E-03	Yes
n-Hexane	2.51E-02	1.76E-02	4.28E-02	1.28E-01	1.20E+01	Yes
Methyl Ethyl Ketone (MEK)	2.76E-01	0.00E+00	2.76E-01	1.21E+00	3.93E+01	Yes
Methyl Isobutyl Ketone (MIBK)	2.87E-01	0.00E+00	2.87E-01	1.26E+00	1.37E+01	Yes
Methylene Diisocyanate (MDI)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03	Yes
Styrene	5.73E-01	0.00E+00	5.73E-01	2.51E+00	6.67E+00	Yes
Toluene	4.38E-01	3.33E-05	4.38E-01	1.92E+00	2.50E+01	Yes
Xylene	5.07E-01	0.00E+00	5.07E-01	2.22E+00	2.90E+01	Yes
Organic Non-HAP						
Acetone	1.56E+00	0.00E+00	1.56E+00	6.83E+00	1.19E+02	Yes
Butyl Acetate	1.19E+00	0.00E+00	1.19E+00	5.21E+00	4.73E+01	Yes
n-Butyl Alcohol	1.10E+00	0.00E+00	1.10E+00	4.81E+00	1.00E+01	Yes
Carbon Black	8.33E-04	0.00E+00	8.33E-04	3.85E-03	2.30E-01	Yes
Cyclohexane	1.29E-02	0.00E+00	1.29E-02	5.84E-02	7.00E+01	Yes
Diisobutyl Ketone	8.30E-02	0.00E+00	8.30E-02	3.84E-01	9.67E+00	Yes
Ethyl Acetate	2.45E-01	0.00E+00	2.45E-01	1.07E+00	9.33E+01	Yes
Ethyl Alcohol	1.90E-02	0.00E+00	1.90E-02	8.34E-02	1.25E+02	Yes
Formaldehyde	0.00E+00	1.75E-04	1.75E-04	1.82E-04	5.10E-04	Yes
Heptane	2.09E-02	0.00E+00	2.09E-02	9.17E-02	1.09E+02	Yes
Isobutanol	3.55E-01	3.33E-05	3.55E-01	1.56E+00	1.00E+01	Yes
Isobutyl Acetate	1.10E-02	0.00E+00	1.10E-02	4.82E-02	4.67E+01	Yes
Isophorone Diisocyanate Polymer	2.50E-03	1.57E-07	2.50E-03	1.10E-02	6.00E-03	Yes
Isopropyl Alcohol (IPA)	6.63E-01	2.06E-02	6.84E-01	2.93E+00	6.53E+01	Yes
Kaolin	3.93E-03	3.04E-02	3.43E-02	4.88E-02	1.33E-01	Yes
1-Methoxy-2-Propanol Acetate	3.21E-01	2.55E-02	3.46E-01	1.43E+00	2.40E+01	Yes
Methyl Acetate	3.32E-01	1.57E-02	3.48E-01	1.47E+00	4.07E+01	Yes
Methyl Amyl Ketone	1.43E+00	0.00E+00	1.43E+00	6.25E+00	1.57E+01	Yes
Methyl Isoamyl Ketone	7.85E-02	4.31E-05	7.85E-02	3.44E-01	1.60E+01	Yes
Methyl Propyl Ketone	1.58E-01	2.56E-06	1.58E-01	6.90E-01	4.67E+01	Yes
Mica	1.09E-04	8.24E-07	1.10E-04	4.80E-04	2.00E-01	Yes
Naphthalene	5.34E-01	1.42E-06	5.34E-01	2.34E+00	3.33E+00	Yes
Pentane	0.00E+00	2.55E-02	2.55E-02	2.65E-02	1.18E+02	Yes
Propionic Acid	1.51E-02	2.55E-06	1.51E-02	6.61E-02	2.00E+00	Yes
Silica Amorphous	1.67E-03	1.08E-05	1.68E-03	7.31E-03	6.67E-01	Yes
Silica Gel	1.12E-03	4.89E-06	1.13E-03	4.92E-03	6.67E-01	Yes
Silica Silicon Dioxide	2.35E-03	2.35E-07	2.35E-03	1.03E-02	6.70E-03	Yes
Stoddard Solvent Mineral Spirits	6.74E-01	2.25E-05	6.74E-01	2.95E+00	3.50E+01	Yes
1,2,4 Trimethyl Benzene	1.88E-01	0.00E+00	1.88E-01	8.24E-01	8.20E+00	Yes
VM&P Naphtha	2.20E-01	0.00E+00	2.20E-01	9.63E-01	9.13E+01	Yes
Metal HAP						
Antimony	1.86E-03	0.00E+00	1.86E-03	8.17E-03	3.30E-02	Yes
Arsenic	0.00E+00	4.66E-07	4.66E-07	4.84E-07	1.50E-06	Yes
Beryllium	0.00E+00	2.79E-08	2.79E-08	2.91E-08	2.80E-05	Yes
Cadmium	0.00E+00	2.56E-06	2.56E-06	2.66E-06	3.70E-06	Yes
Chromium III	5.63E-04	1.37E-05	5.77E-04	2.48E-03	3.30E-02	Yes
Cobalt	0.00E+00	8.24E-07	8.24E-07	8.56E-07	3.30E-03	Yes
Copper	0.00E+00	8.33E-06	8.33E-06	8.67E-06	1.30E-02	Yes
Manganese	0.00E+00	3.73E-06	3.73E-06	3.87E-06	6.70E-02	Yes
Mercury	0.00E+00	2.55E-06	2.55E-06	2.65E-06	3.00E-03	Yes
Molybdenum	0.00E+00	1.08E-05	1.08E-05	1.12E-05	3.33E-01	Yes
Nickel	0.00E+00	4.89E-06	4.89E-06	5.08E-06	2.70E-05	Yes
Selenium	0.00E+00	2.35E-07	2.35E-07	2.45E-07	1.30E-02	Yes
Vanadium	0.00E+00	2.25E-05	2.25E-05	2.35E-05	3.00E-03	Yes
Zinc	0.00E+00	2.84E-04	2.84E-04	2.96E-04	6.67E-01	Yes
Metal Non-HAP						
Aluminum	4.66E-01	0.00E+00	4.66E-01	2.04E+00	6.67E-01	Yes
Barium	2.60E-04	4.31E-05	3.03E-04	1.18E-03	3.30E-02	Yes
			HAP _{TOT}	2.27	9.95	
			HAP _{MAX}	0.58	2.55	

Assumptions when estimating spray booth heater emissions:

- Maximum heater size 10.00 MMBtu/hr
- Annual heater operation 2,080 hr/yr
- Fuel limited to natural gas only

Assumptions when estimating spray booth emissions:

- Maximum coating use rates 4.00 gal/day for all coatings (excluding "B" component)
- Averaging period 24 hr/day average
- Annual booth operation 8,760 hr/yr
- Safety factor 1.20 allowance for coatings not analyzed
- Transfer efficiency 65% control for particulates
- Filter removal efficiency 98% control for particulates
- Isocyanate reaction factor 85% control for isocyanates (not applied to MDI)
- Maximum coating density 16.76 lb/gal
- % of monomer in mixture 1% for diisocyanates in hardener mixture
- If no % of TAP was listed in the MSDS, then 1.0% was assumed

General PTC
Automotive Coating

Uncontrolled Emission Inventory - maximum TAP/HAP results of all coatings analyzed and including booth heater emissions

Criteria Air Pollutants	Booth Emissions	Heater Emissions	Combined Emissions	Booth Emissions	Heater Emissions	Combined Emissions
	lb/hr	lb/hr	lb/hr	T/yr	T/yr	T/yr
NO ₂	0.00	0.93	0.93	0.00	4.08	4.08
CO	0.00	0.40	0.40	0.00	1.76	1.76
PM ₁₀	4.30	0.08	4.38	18.84	0.36	19.20
SO _x	0.000	0.006	0.006	0.000	0.030	0.03
VOC	11.77	0.06	11.83	51.56	0.27	51.83
Lead	0.0E+00	5.0E-06	5.0E-06	0.0E+00	2.0E-05	0.01
	lb/mo	lb/mo	lb/mo	T/yr		
	0.000	0.004	0.004	0.000		

Note: 100 lb/mo Pb in guidance reduced by factor of 10 based on latest Pb NAAQS (reduced in 2008 from 1.5 ug/n³ to 0.15 ug/m³)

Hazardous Air Pollutants (HAP) and Toxic Air Pollutants (TAP)						
	Booth Emissions	Heater Emissions	Combined Emissions	Combined Emissions	Modeling Threshold	Below Threshold?
	lb/hr	lb/hr	lb/hr	T/yr	EL (lb/hr)	
Organic HAP PAH						
2-Methylnaphthalene	0.00E+00	2.35E-07	2.35E-07	1.03E-06	9.10E-05	Yes
3-Methylchloranthrene	0.00E+00	1.76E-08	1.76E-08	7.73E-08	2.50E-06	Yes
Acenaphthene	0.00E+00	1.76E-08	1.76E-08	7.73E-08	9.10E-05	Yes
Acenaphthylene	0.00E+00	1.76E-08	1.76E-08	7.73E-08	9.10E-05	Yes
Anthracene	0.00E+00	2.35E-08	2.35E-08	1.03E-07	9.10E-05	Yes
Benzo(a)anthracene	0.00E+00	1.76E-08	1.76E-08	7.73E-08	9.10E-05	See POM
Benzo(a)pyrene	0.00E+00	1.18E-08	1.18E-08	5.15E-08	2.00E-06	See POM
Benzo(b)fluoranthene	0.00E+00	1.76E-08	1.76E-08	7.73E-08		See POM
Benzo(g,h,i)perylene	0.00E+00	1.18E-08	1.18E-08	5.15E-08	9.10E-05	Yes
Benzo(k)fluoranthene	0.00E+00	1.76E-08	1.76E-08	7.73E-08		See POM
Chrysene	0.00E+00	1.76E-08	1.76E-08	7.73E-08		See POM
Dibenz(a,h)anthracene	0.00E+00	1.18E-08	1.18E-08	5.15E-08		See POM
Dichlorobenzene	0.00E+00	1.18E-05	1.18E-05	5.15E-05	9.10E-05	Yes
7,12-Dimethylbenz(a)anthracene	0.00E+00	1.57E-07	1.57E-07	6.87E-07	9.10E-05	Yes
Fluoranthene	0.00E+00	2.94E-08	2.94E-08	1.29E-07	9.10E-05	Yes
Fluorene	0.00E+00	2.75E-08	2.75E-08	1.20E-07	9.10E-05	Yes
Indeno(1,2,3-cd)pyrene	0.00E+00	1.76E-08	1.76E-08	7.73E-08		See POM
Phenanthrene	0.00E+00	1.67E-07	1.67E-07	7.30E-07	9.10E-05	Yes
Pyrene	0.00E+00	4.90E-08	4.90E-08	2.15E-07	9.10E-05	Yes
Polycyclic Organic Matter (POM, 7-F)	0.00E+00	1.12E-07	1.12E-07	4.90E-07	2.00E-06	Yes
Organic HAP Non-PAH						
Benzene	0.00E+00	2.06E-05	2.06E-05	9.02E-05	8.00E-04	Yes
Ethyl Benzene	5.90E-01	0.00E+00	5.90E-01	2.59E+00	2.90E+01	Yes
Hexamethylene Diisocyanate (HDI)	8.41E-03	0.00E+00	8.41E-03	3.68E-02	2.00E-03	No
n-Hexane	1.06E-01	1.76E-02	1.23E-01	5.41E-01	1.20E+01	Yes
Methyl Ethyl Ketone (MEK)	1.16E+00	0.00E+00	1.16E+00	5.09E+00	3.93E+01	Yes
Methyl Isobutyl Ketone (MIBK)	1.21E+00	0.00E+00	1.21E+00	5.30E+00	1.37E+01	Yes
Methylene Diisocyanate (MDI)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-03	Yes
Styrene	2.42E+00	0.00E+00	2.42E+00	1.06E+01	6.67E+00	Yes
Toluene	1.84E+00	3.33E-05	1.84E+00	8.08E+00	2.50E+01	Yes
Xylene	2.14E+00	0.00E+00	2.14E+00	9.36E+00	2.90E+01	Yes
Organic Non-HAP						
Acetone	6.57E+00	0.00E+00	6.57E+00	2.88E+01	1.19E+02	Yes
Butyl Acetate	5.01E+00	0.00E+00	5.01E+00	2.20E+01	4.73E+01	Yes
n-Butyl Alcohol	4.62E+00	0.00E+00	4.62E+00	2.02E+01	1.00E+01	Yes
Carbon Black	1.75E-01	0.00E+00	1.75E-01	7.68E-01	2.30E-01	Yes
Cyclohexane	5.42E-02	0.00E+00	5.42E-02	2.38E-01	7.00E+01	Yes
Diisobutyl Ketone	3.50E-01	0.00E+00	3.50E-01	1.53E+00	9.67E+00	Yes
Ethyl Acetate	1.03E+00	0.00E+00	1.03E+00	4.52E+00	9.33E+01	Yes
Ethyl Alcohol	8.02E-02	0.00E+00	8.02E-02	3.51E-01	1.25E+02	Yes
Formaldehyde	0.00E+00	7.35E-04	7.35E-04	3.22E-03	5.10E-04	No
Heptane	8.82E-02	0.00E+00	8.82E-02	3.86E-01	1.09E+02	Yes
Isobutanol	1.50E+00	3.33E-05	1.50E+00	6.55E+00	1.00E+01	Yes
Isobutyl Acetate	4.63E-02	0.00E+00	4.63E-02	2.03E-01	4.67E+01	Yes
Isophorone Diisocyanate Polymer	1.05E-02	1.57E-07	1.05E-02	4.62E-02	6.00E-03	No
Isopropyl Alcohol (IPA)	2.79E+00	2.06E-02	2.81E+00	1.23E+01	6.53E+01	Yes
Kaolin	8.28E-01	3.04E-02	8.58E-01	3.76E+00	1.33E-01	No
1-Methoxy-2-Propanol Acetate	1.35E+00	2.55E-02	1.38E+00	6.03E+00	2.40E+01	Yes
Methyl Acetate	1.40E+00	1.57E-02	1.41E+00	6.19E+00	4.07E+01	Yes
Methyl Amyl Ketone	6.01E+00	0.00E+00	6.01E+00	2.63E+01	1.57E+01	Yes
Methyl Isoamyl Ketone	3.31E-01	4.31E-05	3.31E-01	1.45E+00	1.60E+01	Yes
Methyl Propyl Ketone	6.64E-01	1.08E-05	6.64E-01	2.91E+00	4.67E+01	Yes
Mica	2.30E-02	8.24E-07	2.30E-02	1.01E-01	2.00E-01	Yes
Naphthalene	2.25E+00	5.98E-06	2.25E+00	9.86E+00	3.33E+00	Yes
Pentane	0.00E+00	2.55E-02	2.55E-02	1.12E-01	1.18E+02	Yes
Propionic Acid	6.36E-02	2.55E-06	6.36E-02	2.79E-01	2.00E+00	Yes
Silica Amorphous	3.51E-01	1.08E-05	3.51E-01	1.54E+00	6.67E-01	Yes
Silica Gel	2.36E-01	2.06E-05	2.36E-01	1.04E+00	6.67E-01	Yes
Silica Silicon Dioxide	4.94E-01	2.35E-07	4.94E-01	2.16E+00	6.70E-03	No
Stoddard Solvent Mineral Spirits	2.84E+00	2.25E-05	2.84E+00	1.24E+01	3.50E+01	Yes
1,2,4 Trimethyl Benzene	7.92E-01	0.00E+00	7.92E-01	3.47E+00	8.20E+00	Yes
VM&P Naphtha	9.26E-01	0.00E+00	9.26E-01	4.06E+00	9.13E+01	Yes
Metal HAP						
Antimony	3.93E-01	0.00E+00	3.93E-01	1.72E+00	3.30E-02	No
Arsenic	0.00E+00	1.96E-06	1.96E-06	8.59E-06	1.50E-06	No
Beryllium	0.00E+00	1.18E-07	1.18E-07	5.15E-07	2.80E-05	Yes
Cadmium	0.00E+00	1.08E-05	1.08E-05	4.72E-05	3.70E-06	No
Chromium III	1.19E-01	1.37E-05	1.19E-01	5.20E-01	3.30E-02	No
Cobalt	0.00E+00	8.24E-07	8.24E-07	3.61E-06	3.30E-03	Yes
Copper	0.00E+00	8.33E-06	8.33E-06	3.65E-05	1.30E-02	Yes
Manganese	0.00E+00	3.73E-06	3.73E-06	1.63E-05	6.70E-02	Yes
Mercury	0.00E+00	2.55E-06	2.55E-06	1.12E-05	3.00E-03	Yes
Molybdenum	0.00E+00	1.08E-05	1.08E-05	4.72E-05	3.33E-01	Yes
Nickel	0.00E+00	2.06E-05	2.06E-05	9.02E-05	2.70E-05	Yes
Selenium	0.00E+00	2.35E-07	2.35E-07	1.03E-06	1.30E-02	Yes
Vanadium	0.00E+00	2.25E-05	2.25E-05	9.88E-05	3.00E-03	Yes
Zinc	0.00E+00	2.84E-04	2.84E-04	1.25E-03	6.67E-01	Yes
Metal Non-HAP						
Aluminum	1.96E+00	0.00E+00	1.96E+00	8.60E+00	6.67E-01	No
Barium	4.57E-02	4.31E-05	4.58E-02	2.01E-01	3.30E-02	No
		HAP _{TOT}	10.01	43.85		
		HAP _{MAX}	2.42	10.60		

Assumptions when estimating spray booth heater emissions:

- Maximum heater size 10.00 MMBtu/hr
- Annual heater operation 8,760 hr/yr
- Fuel limited to natural gas only

Assumptions when estimating spray booth emissions:

- Maximum coating use rates 18.85 gal/day for all coatings (excluding "B" component) hr/day average
- Averaging period 24 hr/yr
- Annual booth operation 8,760 hr/yr
- Safety factor 1.20 allowance for coatings not analyzed
- Transfer efficiency 65% control for particulates
- Filter removal efficiency 0% control for particulates
- Isocyanate reaction factor 85% control for isocyanates (not applied to MDI)
- Maximum coating density 16.76 lb/gal
- % of monomer in mixture 1% for diisocyanates in hardener mixture
- If no % of TAP was listed in the MSDS, then 1.0% was assumed