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 ................................................................................................................................. 4
  Description .......................................................................................................................................................... 4
  Permitting History ............................................................................................................................................... 4
  Application Scope .............................................................................................................................................. 4
  Application Chronology .................................................................................................................................. 4

TECHNICAL ANALYSIS ...................................................................................................................................... 4
  Emissions Units and Control Devices .................................................................................................................. 5
  Emission Inventories ......................................................................................................................................... 5
  Ambient Air Quality Impact Analyses .................................................................................................................. 6

REGULATORY ANALYSIS ................................................................................................................................. 7
  Attainment Designation (40 CFR 81.313) ............................................................................................................ 7
  Permit to Construct (IDAPA 58.01.01.201) ....................................................................................................... 7
  Tier II Operating Permit (IDAPA 58.01.01.401) .................................................................................................. 7
  Visible Emissions (IDAPA 58.01.01.625) .......................................................................................................... 7
  Rules for the Control of Odors (IDAPA 58.01.01.775-776) ............................................................................. 7
  Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70) ......................................................................... 7
  PSD Classification (40 CFR 52.21) .................................................................................................................. 8
  NSPS Applicability (40 CFR 60) ...................................................................................................................... 8
  NESHAP Applicability (40 CFR 61) .................................................................................................................. 8
  MACT Applicability (40 CFR 63) ..................................................................................................................... 8
  Permit Conditions Review ............................................................................................................................... 11

PUBLIC REVIEW ............................................................................................................................................... 12
  Public Comment Opportunity .......................................................................................................................... 12

APPENDIX A – EMISSION INVENTORIES
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
HDI  hexamethylene diisocyanate
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
MDI  methylene diisocyanate
MMBtu million British thermal units
MSDS Material Safety Data Sheets
NAICS North American Industry Classification System
NESHAP National Emission Standards for Hazardous Air Pollutants
NO₂  nitrogen dioxide
NOₓ  nitrogen oxides
NSPS New Source Performance Standards
PC   permit condition
PM₁₀ 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
short-term emission estimate or emission limit with an averaging period of 24 hours or less
SIC  Standard Industrial Classification
SM80 synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO₂  sulfur dioxide
SOₓ  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
Maaco Collision Repair & Auto Painting is an auto body repair and refinishing facility with paint spray booth(s) which may be equipped with paint spray booth heater(s). The paint spray booth(s) are pressurized downdraft booth(s) with glass fiber filtration media for control of particulate emissions. Drying and paint curing is done in the paint spray booth(s). Natural gas-fired burner(s) may be used to heat the paint spray booth(s). The process includes application of coatings via 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 1970, thus there is no permitting history.

Application Scope
This is the initial PTC for an existing facility that was constructed in 1970.

Application Chronology
January 4, 2011 DEQ received an application and a $1,500 application and processing fee.
January 18 – February 2, 2011 DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
January 28, 2011 DEQ determined that the application was incomplete.
February 9, 2011 DEQ received information from the applicant indicating that use of methylene chloride paint stripper has been discontinued, that up to 2 bed liner applications are performed each month, and that up to 2 undercoating applications are performed each year at the facility. It was requested that DEQ continue processing the application for issuance of the general permit.
February 9, 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 PM$_{10}$ and VOC emissions from painting. The HVLP (or equivalent) spray equipment will control PM$_{10}$ and VOC emissions by having more paint transfer to the desired surfaces than traditional painting equipment.
Emission Inventories

Emission inventories were developed for the proposed automotive coating operation (see Appendix A and the DEQ website for a detailed discussion). Emission estimates of criteria pollutant potential to emit (PTE) were based on the worst-case VOC and PM$_{10}$ 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 verified by DEQ staff. See Appendix A and the DEQ website 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>
<thead>
<tr>
<th>Emissions Unit</th>
<th>PM$_{10}$</th>
<th>SO$_2$</th>
<th>NO$_x$</th>
<th>CO</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paint spray booths and preparation stations</td>
<td>18.84</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>84.14</td>
</tr>
<tr>
<td>Paint spray booth heaters</td>
<td>0.36</td>
<td>0.03</td>
<td>4.08</td>
<td>1.76</td>
<td>0.27</td>
</tr>
<tr>
<td>Uncontrolled Totals</td>
<td>19.20</td>
<td>0.03</td>
<td>4.08</td>
<td>1.76</td>
<td>84.41</td>
</tr>
</tbody>
</table>

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

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 verified by DEQ staff. See Appendix A and the DEQ website for a detailed presentation of the calculations of these emissions for each emissions unit.
Table 3  POST PROJECT POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>PM&lt;sub&gt;10&lt;/sub&gt;</th>
<th>SO&lt;sub&gt;2&lt;/sub&gt;</th>
<th>NO&lt;sub&gt;x&lt;/sub&gt;</th>
<th>CO</th>
<th>VOC</th>
<th>Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lb/hr&lt;sup&gt;a&lt;/sup&gt;</td>
<td>lb/hr&lt;sup&gt;a&lt;/sup&gt;</td>
<td>lb/hr&lt;sup&gt;a&lt;/sup&gt;</td>
<td>lb/hr&lt;sup&gt;a&lt;/sup&gt;</td>
<td>lb/hr&lt;sup&gt;a&lt;/sup&gt;</td>
<td>lb/hr&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Paint spray booths and preparation</td>
<td>0.03</td>
<td>0.14</td>
<td>0.000</td>
<td>0.00</td>
<td>0.00</td>
<td>4.56</td>
</tr>
<tr>
<td>stations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19.98</td>
</tr>
<tr>
<td>Paint spray booth heaters&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.08</td>
<td>0.09</td>
<td>0.006</td>
<td>0.93</td>
<td>0.40</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.07</td>
</tr>
<tr>
<td>Post-Project Totals</td>
<td>0.11</td>
<td>0.23</td>
<td>0.01</td>
<td>0.93</td>
<td>0.40</td>
<td>4.62</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20.05</td>
</tr>
</tbody>
</table>

a) Controlled average emission rate in pounds per hour is a short-term average, based on the proposed daily operating schedule and maximum hourly emission rate estimates.

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 heater(s) with heat input capacity of 10 MMBtu/hr (combined), while the proposed heater(s) may be of lesser capacity.

As demonstrated in Table 2 and Table 3, this facility has an uncontrolled potential to emit for all criteria pollutant emissions less than the major source thresholds of 100 T/yr and a controlled potential to emit for all criteria pollutant emissions less than the major source thresholds 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 emission modeling may be required. This is an existing facility. However, since this is the first time the facility is receiving a permit, pre-project emissions have been assumed to be zero for all criteria pollutants. Table 4 presents the facility-wide change in the potential to emit for criteria pollutants.

Table 4  CHANGES IN POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS

<table>
<thead>
<tr>
<th>Emissions Unit</th>
<th>PM&lt;sub&gt;10&lt;/sub&gt;</th>
<th>SO&lt;sub&gt;2&lt;/sub&gt;</th>
<th>NO&lt;sub&gt;x&lt;/sub&gt;</th>
<th>CO</th>
<th>VOC</th>
<th>Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Project PTE</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Post Project PTE</td>
<td>0.11</td>
<td>0.23</td>
<td>0.01</td>
<td>0.93</td>
<td>0.40</td>
<td>0.06</td>
</tr>
<tr>
<td>Changes in PTE</td>
<td>0.11</td>
<td>0.23</td>
<td>0.01</td>
<td>0.93</td>
<td>0.40</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Because of the daily coating material use limits imposed by DEQ and agreed to by the facility in applying for this Automotive Coating Operations General Permit, no emission screening level (EL) specified in IDAPA 58.01.01.585 or 586 are expected to be exceeded by the facility (see Appendix A and the DEQ website). 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 to less than 25 T/yr for all combined HAP (see Appendix A and the DEQ website).

Ambient Air Quality Impact Analyses

Based on the daily coating material use limits imposed by DEQ and agreed to by the facility in applying for this Automotive Coating Operations General Permit, it was determined whether the PTE for the automotive coating operation exceeded 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

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PTE (T/yr) or lb/hr if listed</th>
<th>DEQ Modeling Guideline Thresholds (T/yr) or lb/hr if listed</th>
<th>Exceeds Modeling Guideline Threshold?</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM&lt;sub&gt;10&lt;/sub&gt;</td>
<td>0.23 or 0.11 lb/hr</td>
<td>1 or 0.2 lb/hr</td>
<td>No</td>
</tr>
<tr>
<td>SO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>0.03</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>NO&lt;sub&gt;x&lt;/sub&gt;</td>
<td>0.97</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>CO</td>
<td>0.40 lb/hr</td>
<td>14 lb/hr</td>
<td>No</td>
</tr>
<tr>
<td>Lead</td>
<td>6E-06 or 0.004 lb/mo</td>
<td>0.6 or 100 lb/month</td>
<td>No</td>
</tr>
</tbody>
</table>
Therefore the automotive coating operation did not require criteria pollutant modeling.

As presented in the DEQ Automotive Coatings EI Spreadsheet (see Appendix A and the DEQ website), there are no TAP that required facility modeling for exceeding the pounds per hour screening emission levels (EL) provided in IDAPA 58.01.01.585 and .586. Therefore the automotive coating operation did not require TAP modeling.

REGULATORY ANALYSIS

**Attainment Designation (40 CFR 81.313)**

Maaco Collision Repair & Auto Painting is located in Ada County, which is designated as attainment or unclassifiable for PM$_{2.5}$, PM$_{10}$, SO$_2$, NO$_2$, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

**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 13.

**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:

- The facility emits or has 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 Appendix A and the DEQ website) and setting paint use to 4.0 gallons per day and setting bed liner component B 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. Emissions were assumed to occur 8,760 hours per year as a worst-case assumption. Uncontrolled emissions of one individual HAP was greater than 10 T/yr, and uncontrolled emissions of all combined HAP was greater than 25 T/yr. The PTE for each individual HAP was less than 10 T/yr, and the PTE for all combined HAP was less than 25 T/yr. Therefore, this facility was classified as a HAP synthetic minor facility and was not classified as a HAP major source subject to Tier I permitting requirements.

Table 6 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 whether the facility was a criteria pollutant major source.
As shown in Table 6, the PTE for each criteria pollutant is less than 100 T/yr. Therefore, this facility was not classified as 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)**

Because this facility applies spray-applied coatings to motor vehicles the requirements of NESHAP subpart HHHHHHH may apply. However, DEQ has not been delegated implementation of this subpart by EPA. Therefore, facilities that may be exempt from the requirements of this subpart must send the exemption request to EPA. Therefore, for this evaluation the requirements of this subpart will be determined for the facility but all HHHHHH requirements in the permit will be prefaced with “Unless an exemption from the EPA has been granted to this facility in accordance with 40 CFR 63.11170 (a)(2)…”

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.
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.

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.

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 17.

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 17.

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.

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 January 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 19.

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 20.

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), (g), and (h) 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 18.

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 18.

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 regulated sources and the control equipment 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 emission limits for PM$_{10}$ and VOC emissions from the automotive coating operation.

Permit Condition 6 incorporates opacity limits for the paint booth stacks, vents, or functionally equivalent openings associated with the automotive coating operation in accordance with IDAPA 58.01.01.625.

Permit Condition 7 incorporates odor limits 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 in accordance with IDAPA 58.01.01.776.

Permit Condition 8 establishes that only natural gas is allowed to be used as fuel in the paint spray booth heater(s) 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 Appendix A and 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 to ensure compliance with the PM$_{10}$ and VOC emission limits specified in Permit Condition 5 and the TAP emission estimates specified in the DEQ Automotive Coating EI Spreadsheet (see Appendix A and the DEQ website).

Permit Condition 11 excludes bed liner component B coatings from each daily usage total. For those bed liner coatings analyzed, component B coatings did not contain substances which would result in emissions of regulated TAP. (Use of component B coatings did result in additional VOC emissions which were included in the emission inventories; see Appendix A.) Component A coatings (also referred to as the “iso” component) are counted toward the daily usage limit in Permit Condition 10 because these coatings contain isocyanates (including HDI and/or MDI) which result in the emissions of regulated TAP.

Permit Condition 12 incorporates the Subpart HHHHHH requirement that the permittee conduct all automotive coating operations in the paint spray 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 spray booth and preparation station exhaust filter systems in accordance with the manufacturer’s specifications. This condition also defines the requirements for paint spray booths and preparation stations.

Permit Condition 13 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 14 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 15 establishes that the permittee shall maintain daily usage records of pre-treatment wash primers, primers, topcoats, clear coats, thinners/reducers, undercoatings, and bed liner components containing isocyanates 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 16 establishes that the permittee shall maintain records as required by the General Provision recordkeeping requirements.

Permit Condition 17 incorporates requirements 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 18 incorporates requirements 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 19 incorporates requirements 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 20 incorporates requirements 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 21 establishes that the federal requirements of 40 CFR Part 63 were incorporated by reference into the requirements of this permit per current DEQ guidance and as provided in IDAPA 58.01.01.107.

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 Application Chronology for public comment opportunity dates.
APPENDIX A – EMISSION INVENTORIES

Coating Operation Emission Calculations:
A daily coatings material use limit was established for automotive coating operations to demonstrate compliance with applicable ambient air quality standards. 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 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 was not 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 PM$_{10}$ and VOC emissions from automotive coating operations (see the calculations as follows):

Spray booth emissions of methylene diisocyanate (MDI) resulting from the application of the “iso” component coating during bed lining coating operations were estimated using the equation and assumptions from Section 19.0 of the MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry. In this equation it was assumed that 100% of the “iso” component sprayed was MDI (k$_{MDI}$ = 1.0), that the combined spray and dry time to apply up to 4 gallons of MDI-based "iso" component was 4 hours or less per day, that “iso” spray coatings were applied 365 days per year, and that “iso” spray coatings were applied at less than 95°F. Although spray booth filtration is required, no additional removal or reduction of MDI emissions was assumed (0% control efficiency).

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 hr/yr ÷ 2,080 hr/yr = 4.2.

Emission estimates from the spreadsheet are provided in the following pages.

Paint Spray Booth Heater Emission Calculations:
To determine worst-case emissions from the paint spray booth 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 hr/yr ÷ 2,080 hr/yr = 4.2.

Emission estimates from the spreadsheet are provided in the following pages.

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### Hazardous Air Pollutants (HAP) and Toxic Air Pollutants (TAP)

<table>
<thead>
<tr>
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<td>lb/hr</td>
<td>lb/hr</td>
<td>lb/hr</td>
<td>lb/hr</td>
</tr>
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<tr>
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**Assumptions when estimating spray booth heater emissions:**
- **Maximum heater size:** 10,000 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)
- **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
- **Ionizable reaction factor:** 85% control for ionizable substances (not applied to MDI)
- **Maximum coating density:** 16.76 lb/gal
- **% of monomer in mixture:** 1% for ionizable substances in hardener mixture
- **If no TAP was listed in the MSDS, then 1% was assumed**

**Assumptions when estimating spray booth MDI emissions from truck bed lining:**
- **Spray emissions were estimated referencing the equation and assumptions from Section 19.0 of the MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry:**
- **Safety factor:** 1.20 allowance for coatings not analyzed
- **Maximum coating density:** 8.83 lb/gal from "Bed Liner B" sheet (reduced in 2008 from 1.5 u/m² to 1.0 u/m²)
- **Averaging period:** 24 hr/day average
- **VOC emissions:** 1.17 lb/hr
- **B component does not contain HAP or TAP substances**

### General PTC

**Automotive Coating**

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

**Table:**
- **Organic HAP Non-PAT**
  - Benzene
  - Ethyl Benzoate
  - Hexachlorobenzene
  - Hexane
  - Methanol
  - Methyl Ethyl Ketone (MEK)
  - Methyl Isobutyl Ketone (MIBK)
  - N-hexane
  - Toluene
  - Xylene
- **Organic Non-HAP**
  - Aliphatic Solvents
  - Butyl Acetate
  - Carbon Tetrachloride
  - Cyclohexane
  - Isobutyl Alcohol
  - Isobutyl Acetate
  - Isopropyl Alcohol
  - Methylene Chloride
  - Norepine (IPA)
  - Propylene Glycol
  - Stoddard Solvent
- **Metal HAP**
  - Antimony
  - Arsenic
  - Cadmium
  - Chromium
  - Copper
  - Iron
  - Lead
  - Zinc
- **Metal Non-HAP**
  - Aluminum
  - Barium
  - Calcium
  - Cadmium
  - Calcium Carbonate
  - Cadmium Carbonate
  - Cadmium Oxide
  - Cadmium Sulphide
  - Calcium Carbonate
  - Calcium Oxide
  - Calcium Sulfate
  - Calcium Trisulfate
  - Calcium Chloride
  - Calcium Phosphate
  - Calcium Silicate
  - Calcium Sulfate
  - Calcium Silicate
  - Calcium Sulfate
### General PTC

#### Automotive Coating

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

<table>
<thead>
<tr>
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<td>lb/hr</td>
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<td>lb/hr</td>
<td>lb/hr</td>
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<tr>
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<tr>
<td>VOC</td>
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<td>5.6E-06</td>
<td>0.0E+00</td>
<td>2.1E-05</td>
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</tr>
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</table>

**Note:** 100 lb/mo Pb in guidance reduced by factor of 10 based on latest Pb NAAQS (reduced in 2004 from 1.5 μg/m³ to 0.15 μg/m³).

### Organic HAP OPI (coinventor)

<table>
<thead>
<tr>
<th>Booth Emissions</th>
<th>Heater Emissions</th>
<th>Combined Emissions</th>
<th>Modeling Threshold</th>
<th>Below Threshold?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>lb/hr</td>
<td>lb/hr</td>
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### Organic HAP Non-PHAP

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<th>Combined Emissions</th>
<th>Modeling Threshold</th>
<th>Below Threshold?</th>
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<tr>
<td></td>
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<td>lb/hr</td>
<td>lb/hr</td>
<td>lb/hr</td>
</tr>
</tbody>
</table>

### Hazardous Air Pollutants (HAP) and Toxic Air Pollutants (TAP)

<table>
<thead>
<tr>
<th>Booth Emissions</th>
<th>Heater Emissions</th>
<th>Combined Emissions</th>
<th>Modeling Threshold</th>
<th>Below Threshold?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>lb/hr</td>
<td>lb/hr</td>
<td>lb/hr</td>
</tr>
</tbody>
</table>

### Assumptions when estimating spray booth heater emissions:

- **Maximum heater size**: 10.00 MBtu/hr
- **Annual heater operation**: 8,760 hr
- **Fuel limited to natural gas only**

### Assumptions when estimating spray booth emissions:

- **Maximum coating use rate**: 16.85 gal/day for all coatings
  - (excluding "B" component)
- **Averaging period**: 24 hr/day average
- **Annual booth operation**: 8,760 hr
- **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% was assumed**

### Assumptions when estimating spray booth MDI emissions from truck bed lining:

- **Spray booth emissions were estimated referencing the equation and assumptions from Section 19.0 of the MDI/Polymeric Membranes Emissions Reporting Guidance for the Polyurethane Industry, Alliance for the Polyurethane Industry (API), 2004**
- **100% of isocyanate content was MDI (kMDI = 1.0)**
- **Spray booth filtration does not reduce or remove MDI (0% control efficiency).**
- **The combined spray and dry time to apply 1 gal of “iso” component is 4 hr or less**
- **Spray coatings are applied 365 days per year**
- **Spray coatings are applied at less than 9°F**

### Assumptions when estimating additional VOC emissions from truck bed liner “B” component/VOC from the “iso” component were accounted for within the analysis for the 4 gal/day limit:

- **Maximum “B” use rate**: 16.85 gal/day/(1.1 by volume A/B mixture)
- **Safety factor**: 1.20 allowance for coatings not analyzed
- **Maximum coating density**: 8.83 lb/gal from “Bed Liner B” sheet
- **Averaging period**: 24 hr/day average
- **VOC emissions**: 7.44 lb/hr
- **B component does not contain HAP or TAP substances**

### Metal HAP

<table>
<thead>
<tr>
<th>Booth Emissions</th>
<th>Heater Emissions</th>
<th>Combined Emissions</th>
<th>Modeling Threshold</th>
<th>Below Threshold?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>lb/hr</td>
<td>lb/hr</td>
<td>lb/hr</td>
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</tbody>
</table>

### Metal Non-HAP

<table>
<thead>
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<th>Booth Emissions</th>
<th>Heater Emissions</th>
<th>Combined Emissions</th>
<th>Modeling Threshold</th>
<th>Below Threshold?</th>
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<tr>
<td></td>
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<td>lb/hr</td>
<td>lb/hr</td>
<td>lb/hr</td>
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</table>

### General PTC

**Emissions Reduction**

- **Maximum heater size**: 10.00 MBtu/hr
- **Annual heater operation**: 8,760 hr
- **Fuel limited to natural gas only**

### Assumptions when estimating spray booth heater emissions:

- **Maximum heater size**: 10.00 MBtu/hr
- **Annual heater operation**: 8,760 hr
- **Fuel limited to natural gas only**

### Assumptions when estimating spray booth emissions:

- **Maximum coating use rate**: 16.85 gal/day for all coatings
  - (excluding "B" component)
- **Averaging period**: 24 hr/day average
- **Annual booth operation**: 8,760 hr
- **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% was assumed**

### Assumptions when estimating spray booth MDI emissions from truck bed lining:

- **Spray booth emissions were estimated referencing the equation and assumptions from Section 19.0 of the MDI/Polymeric Membranes Emissions Reporting Guidance for the Polyurethane Industry, Alliance for the Polyurethane Industry (API), 2004**
- **100% of isocyanate content was MDI (kMDI = 1.0)**
- **Spray booth filtration does not reduce or remove MDI (0% control efficiency).**
- **The combined spray and dry time to apply 1 gal of “iso” component is 4 hr or less**
- **Spray coatings are applied 365 days per year**
- **Spray coatings are applied at less than 9°F**

### Assumptions when estimating additional VOC emissions from truck bed liner “B” component/VOC from the “iso” component were accounted for within the analysis for the 4 gal/day limit:

- **Maximum “B” use rate**: 16.85 gal/day/(1.1 by volume A/B mixture)
- **Safety factor**: 1.20 allowance for coatings not analyzed
- **Maximum coating density**: 8.83 lb/gal from “Bed Liner B” sheet
- **Averaging period**: 24 hr/day average
- **VOC emissions**: 7.44 lb/hr
- **B component does not contain HAP or TAP substances**