MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 122017-003

Project Number: 2017-04-001
Installation Number: 071-0020

Parent Company: Reading Midwest Distribution, LLC

Parent Company Address: 825 E. Wyoming Blvd., Reading, PA 19611

Installation Name: Reading Midwest Distribution, LLC

Installation Address: 235 North Service Road West, St. Clair, MO 63077

Location Information: Franklin County, S25, T42N, R1W

Application for Authority to Construct was made for:
Service truck bodies that are to be welded, painted, and mounted on truck chassis. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

☐ Standard Conditions (on reverse) are applicable to this permit.

☑ Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

Jordan Hull

Prepared by
Jordan Hull
New Source Review Unit

Kyra L Moore

Director or Designee
Department of Natural Resources

DEC 12 2017

Effective Date

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Enforcement and Compliance Section of the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Enforcement and Compliance Section of the Department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department's regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit using the contact information below.

Contact Information:
Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:
http://dnr.mo.gov/regions/

SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Reading Midwest Distribution, LLC
Franklin County, S25, T42N, R1W

1. Superseding Condition
   A. The conditions of this permit supersede all special conditions found in the previously issued construction permit 072003-004 issued by the Air Pollution Control Program.

2. VOC Emission Limitations
   A. Reading Midwest Distribution, LLC shall emit less than 100.0 tons of VOCs in any consecutive 12-month period from the entire installation. The entire installation and emissions points are listed in Table 2.

   B. Reading Midwest Distribution, LLC shall develop and use forms to demonstrate compliance with Special Condition 2.A. The forms shall contain a minimum of the following information:

      1) Installation Name
      2) Installation ID
      3) Permit Number
      4) The current month
      5) The current 12-month date range
      6) All emission points listed in Table 2 that have emitted VOCs for the current month
      7) Each emission point's current monthly throughput
      8) The emission factor for each emission point.
      9) Monthly emissions for each emission point
      10) The total monthly emissions for VOCs
      11) 12-Month Rolling Total for VOCs. To obtain this value add the current month's VOC total to the previous 11 months VOC totals
      12) Indication of Compliance with Special Condition 2.A.

   C. The emission factors and calculation methodology stated in Appendix D shall be used in the development of the compliance forms.

3. Individual and Combined HAP Emission Limitations
   A. Reading Midwest Distribution, LLC shall emit less than 25.0 tons of combined HAP in any consecutive 12-month period from the entire installation. The entire installation and emissions points are listed in Table 2.

SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

B. Reading Midwest Distribution, LLC shall emit less than the SMAL or 10.0 tons of each individual HAP in any consecutive 12-month period from the entire installation. The entire installation and emissions points are listed in Table 2.

C. Reading Midwest Distribution, LLC shall develop and use forms for each individual HAP to demonstrate compliance with Special Condition 3.A. and 3.B. The forms shall contain a minimum of the following information.
1) Installation Name
2) Installation ID
3) Permit Number
4) The current month
5) The current 12-month date range
6) Emission points listed in Table 2 that emit HAPs
7) Each emission point's current monthly throughput
8) The HAP emission factor for each emission point
9) Monthly individual HAP emissions for each emission point, except where note in Appendix D as not needed
10) Monthly emissions for the combined HAPs for each emission point
11) 12-month rolling total for each individual HAP and for the combined HAPs
12) Indication of Compliance with Special Condition 3.A. and 3.B.

D. The emission factors and methodology stated in Appendix D shall be used in the development of the compliance forms.

4. Alternative Coating Materials

A. Reading Midwest Distribution, LLC is allowed to use alternative coatings for the emission units listed in Table 2 that is different from the materials listed in the Application for Authority to Construct.

B. Reading Midwest Distribution, LLC shall seek approval from the Air Pollution Control Program prior to using of any alternative coating that contains a particulate HAP. A listing of HAPs considered to be particulate HAPs are available in Appendix B.

C. The limits established in Special Conditions 2 and 3 shall include emissions from the use of any new coating allowed by this special condition. Their emissions shall be accounted for in the recordkeeping associated with these limits.

D. Reading Midwest Distribution, LLC shall maintain a list of any new coatings used and the date they are either first bought or used.

SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

E. Reading Midwest Distribution, LLC shall maintain a copy of the coating's information and other documentation used (such as an SDS or Regulatory Report) to estimate the coatings emissions.

F. Reading Midwest Distribution, LLC shall denote each individual HAP present in any new coating used.

5. Control Device Requirement-Filter

A. Reading Midwest Distribution, LLC shall control emissions from the Booth Paint Guns (EU-Undercoat, Prime, Topcoat) using a filter media rated for at least 95.0 percent overspray removal efficiency as specified in the permit application.

B. The filter media shall be operated and maintained in accordance with the manufacturer's specifications. The filter media shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources' employees may easily observe them.

C. Replacement filters shall be kept on hand at all times. The filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

D. Reading Midwest Distribution, LLC shall monitor and record the operating pressure drop across the filter media at least once every 24 hours of operation. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

E. Reading Midwest Distribution, LLC shall maintain an operating and maintenance log for the filter media which shall include the following:
   1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

6. Capture Device Requirement – Enclosed Booth

A. Reading Midwest Distribution, LLC shall capture all emissions from the surface coating (EU-Undercoat, Prime, Topcoat) applied with a totally enclosed booth and exhaust fan(s). Emissions from the booths shall be routed through the filter as stated in Special Condition 3.

B. Reading Midwest Distribution, LLC shall operate the booth's exhaust fan(s) at all times surface coating is spray applied.

SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

C. Reading Midwest Distribution, LLC shall keep all paint booth doors closed at all times during operation except during personnel or equipment entrance or egress.

7. Operational Requirement

A. Reading Midwest Distribution, LLC shall keep the surface coatings in sealed containers whenever the materials are not in use. Reading Midwest Distribution, LLC shall provide and maintain suitable, easily read, permanent markings on all of the above containers used with this equipment.

8. Record Keeping and Reporting Requirements

A. Reading Midwest Distribution, LLC shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include SDS for all materials used.

B. Reading Midwest Distribution, LLC shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW
Project Number: 2017-04-001
Installation ID Number: 071-0020
Permit Number: 122017-003

Installation Address:
Reading Midwest Distribution, LLC
235 North Service Road West
St. Clair, MO 63077

Parent Company:
Reading Midwest Distribution, LLC
825 E. Wyoming Blvd.
Reading, PA 19611

Franklin County, S25, T42N, R1W

REVIEW SUMMARY

- The application was deemed complete on April 10, 2017.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. The HAP of concern from this process is toluene.
- The installation is not subject to 40 CFR 60, Subpart MM, *Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations* as the gross vehicle weight of all trucks produced exceed 3,850 kilograms.
- This installation is not subject to Subpart HHHHHH, *National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources* as none of the coating contain compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).
- 40 CFR Part 63, Subpart IIII, *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks* , 40 CFR Part 63, Subpart MMMM - *National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products* both do not apply as the facility is not a major source for HAPs and this not considered a light-duty truck as weight exceeds 3,850 kilograms.
- Filtration media and booths are being used to control the particulate matter (PM), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) from the Paint Guns (EU-3,4,& 5).
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required.* Potential emissions of all pollutants, besides VOCs, are below de minimis levels. VOC emissions have been conditioned to below major source levels.

- This installation is located in Franklin County, a nonattainment area for the 8-hour ozone standard and the PM-2.5 standard and an attainment area for all other criteria pollutants.

- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 100.0 tons per year for $PM_{2.5}$, VOC, and NO_x because the facility is located in a non-attainment area. Fugitive emissions are not counted toward major source applicability.

- Ambient air quality modeling was not performed since potential emissions of the application are conditioned below de minimis levels.

- Emissions testing is not required for the equipment as a part of this permit. Testing may be required as part of other state, federal or applicable rules.

- A Basic Operating Permit application is required for this installation within 30 days of the issuance of this permit.

- Approval of this permit is recommended with special conditions.

INSTALLATION /PROJECT DESCRIPTION

This site was previously known as Caseco Truck Body Company and was operating under permit OP2010-134 issued to Steelweld Equipment Co., Inc. The Reading Truck Group, LLC purchased this site in January 2017. Reading Midwest Distribution, LLC (RMD) manufactures flatbed truck beds and service bodies that are mounted onto truck chassis. A new construction permit application was submitted. This was done to account for the new product and to have an accurate equipment list. Reading Midwest Distribution, LLC requested the 100.0 tons per year VOC limitation for the entire installation.

The following New Source Review permits have been issued to Reading Midwest Distribution, LLC from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
072003-004	Replacement of existing painting booths and addition of cure oven

During the process of manufacturing the service and stake bodies, raw materials and metal go through various production steps. These steps include forming metal, welding the formed metal, preparing the welded units for painting, undercoating the units, then priming and top coating the assembled unit. Service bodies and Stake (Flat) bodies have the same production steps. However, amounts of materials used are different.

Stake bodies represent worst case. Service bodies have an MHDR of 0.250 units/hour while the Stake body maximum production is at 5.210 units/hour.

Table 2: Emission Units:

Emission Unit	Description	MHDR
EU-Weld	Welding operations (8 assembly metal weld stations, 2 final metal weld stations)	268.46 lbs. of electrode/hr. (total)
EU-Paint Prep	Paint prep*(3M All-around autobody sealant)	0.12 gal/unit
EU-Undercoat	Undercoating Spray Booth (Transcoat 101)	2.66 gal/unit
EU-Prime[1]	Primer Spray Booth	2.0 gal/ unit
EU-Topcoat[2]	Top Coat Spray Booth	3.45 gal/ unit
EU-Boiler 1	Boiler 1	4.5 MMBtu/hr
EU-Boiler 2	Boiler 2	0.15 MMBTU/hr
EU-Space Heaters 1	Space heaters (NG)	4 units @ 0.15 MMBTU/hr
EU-Space Heaters 2	Space heaters (NG)	2 units @ 0.18 MMBtu/hr
EU-Space Heaters 3	Space heaters (NG	3 units @ 0.24 MMBtu/hr
EU-Batch Drying Oven	Curing oven (NG)	1.6 MMBtu/hr
EU-Water Heater	Water heater (NG)	0.034 MMBtu/hr
EU-Final Assembly[3]	Final assembly	0.49 gal/unit

[1]EU-Prime includes spray application of Epoxy Primer Gray X503, Epoxy Hardener/Accelerator, and VOC Solvent.
[2]EU- Topcoat includes spray application of GC1738PS (GC series-black), Genesis Reducer, Genesis Hardener, and Genesis Accelerator
[3]EU-Final assembly involves manual application of urethane & spray application of enamel.

EMISSIONS/CONTROLS EVALUATION

Emission calculations for VOCs, HAPs, and Particulate Matter were based on a mass balance approach derived from applicable Material Safety Data Sheets (MSDS). The proportions of coatings, solvent, degreaser, and adhesive/caulking utilized per body is known and can be found in the potential emission calculations included as an appendix to this permit. Transfer efficiencies for applying the coatings ranged from 50% (aerosol) to 100% (manual/brush) depending on how the coating was applied and the type of gun used. The control efficiency of at least 95% for the filter media was specified in the permit application.

GC- Genesis 3.5 VOC Black is the worst case topcoat used by Reading Midwest Distribution and was evaluated for the compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), and cadmium (Cd) to verify they are not subject to MACT 6H. None of these compounds were found in the MSDS sheets. Gr 1070 (Reducer), GH

1091 (Hardener), and GA 1097 (Accelerator) are also used in the top coat booth. GC-Genesis 3.5 VOC Gray and White are also used at this facility.

Emission factors for the natural gas combustion (boilers, space heaters, and curing oven were taken from EPA AP-42 Chapter 1.4 *Natural Gas Combustion* Tables 1.4-1, 1.4-2, and 1.4-3 (July 1998).

Emission factors for the welding operations were taken from EPA AP-42 Chapter 12.19 *Electric Arc Welding* Table 12.19-2 (January 1995).

The following table provides an emissions summary for this project. Existing actual emissions were taken from the installation's 2016 EIQ. Potential uncontrolled emissions of the application represent the potential of the equipment, assuming continuous operation (8760 hours per year) without the use of the filter media on the paint booths. New Installation Controlled Potential Emissions of the application represent the potential of the equipment, assuming continuous operation (8760 hours per year) with the use of the filter media on the paint booths.

Table 3: Emissions Summary (tpy)

Pollutant	Regulatory *De Minimis* Levels	Existing Actual Emissions (2016 EIQ)	Potential Uncontrolled Emissions of the Project	Potential Controlled Emissions of the Project	New Installation Controlled Potential Emissions
PM	25.0	N/D	262.02	4.38	4.38
PM_{10}	15.0	0.00	262.22	4.42	4.42
$PM_{2.5}$	10.0	0.00	262.22	4.42	4.42
SOx	40.0	0.00	0.03	0.02	0.02
NOx	40.0	0.02	3.42	0.78	0.78
VOC	40.0	1.81	433.57	<100.0	<100.0
CO	100.0	0.14	2.88	0.66	0.66
GHG (CO_2e)	N/A	N/D	N/D	N/D	N/D
GHG (mass)	N/A	N/D	N/D	N/D	N/D
HAPs*	10.0/25.0	0.12	36.60	8.35	8.35
Toluene	10.0	N/D	20.95	4.78	4.78

N/A = Not Applicable; N/D = Not Determined
*Individual HAPs less than 0.5 tpy emissions and below their SMAL are not individually listed here but can be found in Appendix C.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants,

besides VOCs, are below de minimis levels. VOC emissions have been conditioned to below major source levels.

APPLICABLE REQUIREMENTS

Reading Midwest Distribution, LLC shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information,* 10 CSR 10-6.110
    - Per 10 CSR 10-6.110(4)(B)2.B(II) and (4)(B)2.C(II) a full EIQ is required for the first full calendar year the equipment (or modifications) approved by this permit are in operation.

- *Operating Permits*, 10 CSR 10-6.065
    - A Basic Operating Permit application is required for this installation within 30 days of the issuance of this permit.

- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170

- *Start-Up, Shutdown, and Malfunction Conditions,* 10 CSR 10-6.050

- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220

- *Restriction of Emission of Odors*, 10 CSR 10-6.165

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 27, 2017, received April 3, 2017, designating Reading Midwest Distribution, LLC as the owner and operator of the installation.

APPENDIX A

Abbreviations and Acronyms

% .....percent
°F .....degrees Fahrenheit
acfm.....actual cubic feet per minute
BACT.....Best Available Control Technology
BMPs.....Best Management Practices
Btu.....British thermal unit
CAM .....Compliance Assurance Monitoring
CAS.....Chemical Abstracts Service
CEMS .....Continuous Emission Monitor System
CFR.....Code of Federal Regulations
CO .....carbon monoxide
CO_2.....carbon dioxide
CO_2e.....carbon dioxide equivalent
COMS.....Continuous Opacity Monitoring System
CSR.....Code of State Regulations
dscf.....dry standard cubic feet
EIQ.....Emission Inventory Questionnaire
EP.....Emission Point
EPA.....Environmental Protection Agency
EU .....Emission Unit
fps.....feet per second
ft .....feet
GACT .....Generally Available Control Technology
GHG.....Greenhouse Gas
gpm .....gallons per minute
gr .....grains
GWP .....Global Warming Potential
HAP.....Hazardous Air Pollutant
hr.....hour
hp .....horsepower
lb.....pound
lbs/hr.....pounds per hour
MACT.....Maximum Achievable Control Technology
$\mu g/m^3$.....micrograms per cubic meter
m/s.....meters per second
Mgal.....1,000 gallons
MW .....megawatt
MHDR.....maximum hourly design rate
MMBtu ....Million British thermal units
MMCF .....million cubic feet
MSDS.....Material Safety Data Sheet
NAAQS ....National Ambient Air Quality Standards
NESHAPs National Emissions Standards for Hazardous Air Pollutants
NO_x.....nitrogen oxides
NSPS .....New Source Performance Standards
NSR .....New Source Review
PM.....particulate matter
$PM_{2.5}$.....particulate matter less than 2.5 microns in aerodynamic diameter
PM_{10} .....particulate matter less than 10 microns in aerodynamic diameter
ppm .....parts per million
PSD.....Prevention of Significant Deterioration
PTE .....potential to emit
RACT.....Reasonable Available Control Technology
RAL.....Risk Assessment Level
SCC .....Source Classification Code
scfm .....standard cubic feet per minute
SDS.....Safety Data Sheet
SIC.....Standard Industrial Classification
SIP.....State Implementation Plan
SMAL.....Screening Model Action Levels
SO_x.....sulfur oxides
SO_2.....sulfur dioxide
tph .....tons per hour
tpy.....tons per year
VMT.....vehicle miles traveled
VOC .....Volatile Organic Compound

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Appendix B- Air Pollution Control Program
Table of Hazardous Air Pollutants and Screening Model Action Levels

Chemical	CAS #	SMAL tons/yr	Group ID	VOC	PM
ACETALDEHYDE	75-07-0	9		Y	N
ACETAMIDE	60-35-5	1		Y	N
ACETONITRILE	75-05-8	4		Y	N
ACETOPHENONE	98-86-2	1		Y	N
ACETYLAMINOFLUORINE, [2-]	53-96-3	0.005	V	Y	Y
ACROLEIN	107-02-8	0.04		Y	N
ACRYLAMIDE	79-06-1	0.02		Y	N
ACRYLIC ACID	79-10-7	0.6		Y	N
ACRYLONITRILE	107-13-1	0.3		Y	N
ALLYL CHLORIDE	107-05-1	1		Y	N
AMINOBIPHENYL, [4-]	92-67-1	1	V	Y	N
ANILINE	62-53-3	1		Y	N
ANISIDINE, [ORTHO-]	90-04-0	1		Y	N
ANTHRACENE	120-12-7	0.01	V	Y	N
ANTIMONY COMPOUNDS		5	H	N	Y
ANTIMONY PENTAFLUORIDE	7783-70-2	0.1	H	N	Y
ANTIMONY POTASSIUM TARTRATE	28300-74-5	1	H	N	Y
ANTIMONY TRIOXIDE	1309-64-4	1	H	N	Y
ANTIMONY TRISULFIDE	1345-04-6	0.1	H	N	Y
ARSENIC COMPOUNDS		0.005	I	N	Y
ASBESTOS	1332-21-4	0	A	N	Y
BENZ(A)ANTHRACENE	56-55-3	0.01	V	Y	N
BENZENE	71-43-2	2		Y	N
BENZIDINE	92-87-5	0.0003	V	Y	N
BENZO(A)PYRENE	50-32-8	0.01	V	Y	N
BENZO(B)FLUORANTHENE	205-99-2	0.01	V	Y	N
BENZO(K)FLUORANTHENE	207-08-9	0.01	V	Y	N
BENZOTRICHLORIDE	98-07-7	0.006		Y	N
BENZYL CHLORIDE	100-44-7	0.1		Y	N
BERYLLIUM COMPOUNDS		0.008	J	N	Y
BERYLLIUM SALTS		2E-05	J	N	Y
BIPHENYL, [1,1-]	92-52-4	10	V	Y	N
BIS(CHLOROETHYL)ETHER	111-44-4	0.06		Y	N
BIS(CHLOROMETHYL)ETHER	542-88-1	0.0003		Y	N
BROMOFORM	75-25-2	10		Y	N
BROMOMETHANE	74-83-9	10		Y	N
BUTADIENE, [1,3-]	106-99-0	0.07		Y	N
BUTOXYETHANOL ACETATE, [2-]	112-07-2	5	P	Y	N
BUTYLENE OXIDE, [1,2-]	106-88-7	1		Y	N
CADMIUM COMPOUNDS		0.01	K	N	Y
CALCIUM CYANAMIDE	156-62-7	10		Y	Y
CAPROLACTAM (Delisted)	105-60-2				
CAPTAN	133-06-2	10		Y	Y
CARBARYL	63-25-2	10	V	Y	Y
CARBON DISULFIDE	75-15-0	1		Y	N
CARBON TETRACHLORIDE	56-23-5	1		Y	N
CARBONYL SULFIDE	463-58-1	5		Y	N
CATECHOL	120-80-9	5		Y	N
CHLORAMBEN	133-90-4	1		Y	Y
CHLORDANE	57-74-9	0.01		Y	Y
CHLORINE	7782-50-5	0.1		N	N
CHLOROACETIC ACID	79-11-8	0.1		Y	N
CHLOROACETOPHENONE, [2-]	532-27-4	0.06		Y	N
CHLOROBENZENE	108-90-7	10		Y	N
CHLOROBENZILATE	510-15-6	0.4	V	Y	Y
CHLOROFORM	67-66-3	0.9		Y	N
CHLOROMETHYL METHYL ETHER	107-30-2	0.1		Y	N
CHLOROPRENE	126-99-8	1		Y	N
CHROMIUM (VI) COMPOUNDS		0.002	L	N	Y
CHROMIUM COMPOUNDS		5	L	N	Y
CHRYSENE	218-01-9	0.01	V	Y	N
COBALT COMPOUNDS		0.1	M	N	Y
COKE OVEN EMMISIONS	8007-45-2	0.03	N	Y	N
CRESOL, [META-]	108-39-4	1	B	Y	N
CRESOL, [ORTHO-]	95-48-7	1	B	Y	N
CRESOL, [PARA-]	106-44-5	1	B	Y	N
CRESOLS (MIXED ISOMERS)	1319-77-3	1	B	Y	N
CUMENE	98-82-8	10		Y	N
CYANIDE COMPOUNDS		0.1	O	Y	N
DDE	72-55-9	0.01	V	Y	Y
DI(2-ETHYLHEXYL) PHTHALATE, (DEHP)	117-81-7	5		Y	N
DIAMINOTOLUENE, [2,4-]	95-80-7	0.02		Y	N
DIAZOMETHANE	334-88-3	1		Y	N
DIBENZ(A,H)ANTHRACENE	53-70-3	0.01	V	Y	N
DIOXINS/FURANS		6E-07	D,V	Y	N
DIBENZOFURAN	132-64-9	5	V	Y	N
DIBROMO-3-CHLOROPROPANE, [1,2-]	96-12-8	0.01		Y	N
DIBROMOETHANE, [1,2-]	106-93-4	0.1		Y	N
DIBUTYL PHTHALATE	84-74-2	10		Y	Y
DICHLOROBENZENE, [1,4-]	106-46-7	3		Y	N
DICHLOROBENZIDENE, [3,3-]	91-94-1	0.2	V	Y	Y
DICHLOROETHANE, [1,1-]	75-34-3	1		Y	N
DICHLOROETHANE, [1,2-]	107-06-2	0.8		Y	N
DICHLOROETHYLENE, [1,1-]	75-35-4	0.4		Y	N
DICHLOROMETHANE	75-09-2	10		N	N
DICHLOROPHENOXY ACETIC ACID, [2,4-]	94-75-7	10	C	Y	Y
DICHLOROPROPANE, [1,2-]	78-87-5	1		Y	N
DICHLOROPROPENE, [1,3-]	542-75-6	1		Y	N
DICHLORVOS	62-73-7	0.2		Y	N
DIETHANOLAMINE	111-42-2	5		Y	N
DIETHYL SULFATE	64-67-5	1		Y	N
DIETHYLENE GLYCOL MONOBUTYL ETHER	112-34-5	5	P	Y	N
DIMETHOXYBENZIDINE, [3,3-]	119-90-4	0.1	V	Y	Y
DIMETHYL BENZIDINE, [3,3-]	119-93-7	0.008	V	Y	Y
DIMETHYL CARBAMOYL CHLORIDE	79-44-7	0.02		Y	N
DIMETHYL FORMAMIDE	68-12-2	1		Y	N
DIMETHYL HYDRAZINE, [1,1-]	57-14-7	0.008		Y	N
DIMETHYL PHTHALATE	131-11-3	10		Y	N
DIMETHYL SULFATE	77-78-1	0.1		Y	N
DIMETHYLAMINOAZOBENZENE, [4-]	60-11-7	1		Y	N
DIMETHYLANILINE, [N-N-]	121-69-7	1		Y	N
DINITRO-O-CRESOL, [4,6-] (Note 6)	534-52-1	0.1	E	Y	Y
DINITROPHENOL, [2,4-]	51-28-5	1		Y	N
DINITROTOLUENE, [2,4-]	121-14-2	0.02		Y	N
DIOXANE, [1,4-]	123-91-1	6		Y	N
DIPHENYLHYDRAZINE, [1,2-]	122-66-7	0.09	V	Y	Y
DIPHENYLMETHANE DIISOCYANATE, [4,4-]	101-68-8	0.1	V	Y	N
EPICHLOROHYDRIN	106-89-8	2		Y	N
ETHOXYETHANOL, [2-]	110-80-5	10	P	Y	N
ETHOXYETHYL ACETATE, [2-]	111-15-9	5	P	Y	N
ETHYL ACRYLATE	140-88-5	1		Y	N
ETHYL BENZENE	100-41-4	10		Y	N

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Appendix B- Air Pollution Control Program
Table of Hazardous Air Pollutants and Screening Model Action Levels

Chemical	CAS #	SMAL tons/yr	Group ID	VOC	PM
ETHYL CHLORIDE	75-00-3	10		Y	N
ETHYLENE GLYCOL	107-21-1	10		Y	N
ETHYLENE GLYCOL MONOBUTYL ETHER (Delisted)	111-76-2				
ETHYLENE GLYCOL MONOHEXYL ETHER	112-25-4	5	P	Y	N
ETHYLENE IMINE [AZIRIDINE]	151-56-4	0.003		Y	N
ETHYLENE OXIDE	75-21-8	0.1		Y	N
ETHYLENE THIOUREA	96-45-7	0.6		Y	Y
FORMALDEHYDE	50-00-0	2		Y	N
GLYCOL ETHER (ETHYLENE GLYCOL ETHERS)		5	P	Y	N
GLYCOL ETHER (DIETHYLENE GLYCOL ETHERS)		5	P	Y	N
HEPTACHLOR	76-44-8	0.02		Y	N
HEXACHLOROBENZENE	118-74-1	0.01		Y	N
HEXACHLOROBUTADIENE	87-68-3	0.9		Y	N
HEXACHLOROCYCLOHEXANE, [ALPHA-]	319-84-6	0.01	F	Y	N
HEXACHLOROCYCLOHEXANE, [BETA-]	319-85-7	0.01	F	Y	N
HEXACHLOROCYCLOHEXANE, [DELTA-]	319-86-8	0.01	F	Y	N
HEXACHLOROCYCLOHEXANE, [TECHNICAL]	608-73-1	0.01	F	Y	N
HEXACHLOROCYCLOPENTADIENE	77-47-4	0.1		Y	N
HEXACHLOROETHANE	67-72-1	5		Y	N
HEXAMETHYLENE,-1,6-DIISOCYANATE	822-06-0	0.02		Y	N
HEXAMETHYLPHOSPHORAMIDE	680-31-9	0.01		Y	N
HEXANE, [N-]	110-54-3	10		Y	N
HYDRAZINE	302-01-2	0.004		N	N
HYDROGEN CHLORIDE	7647-01-0	10		N	N
HYDROGEN FLUORIDE	7664-39-3	0.1		N	N
HYDROQUINONE	123-31-9	1		Y	N
INDENO(1,2,3CD)PYRENE	193-39-5	0.01	V	Y	N
ISOPHORONE	78-59-1	10		Y	N
LEAD COMPOUNDS		0.01	Q	N	Y
LINDANE [GAMMA-HEXACHLOROCYCLOHEXANE]	58-89-9	0.01	F	Y	N
MALEIC ANHYDRIDE	108-31-6	1		Y	N
MANGANESE COMPOUNDS		0.8	R	N	Y
MERCURY COMPOUNDS		0.01	S	N	N
METHANOL	67-56-1	10		Y	N
METHOXYCHLOR	72-43-5	10	V	Y	Y
METHOXYETHANOL, [2-]	109-86-4	10	P	Y	N
METHYL CHLORIDE	74-87-3	10		Y	N
METHYL ETHYL KETONE (Delisted)	78-93-3				
METHYL HYDRAZINE	60-34-4	0.06		Y	N
METHYL IODIDE	74-88-4	1		Y	N
METHYL ISOBUTYL KETONE	108-10-1	10		Y	N
METHYL ISOCYANATE	624-83-9	0.1		Y	N
METHYL METHACRYLATE	80-62-6	10		Y	N
METHYL TERT-BUTYL ETHER	1634-04-4	10		Y	N
METHYLCYCLCOPENTADIENYL MANGANESE	12108-13-3	0.1	R	N	Y
METHYLENE BIS(2-CHLOROANILINE), [4,4-]	101-14-4	0.2	V	Y	Y
METHYLENEDIANILINE, [4,4-]	101-77-9	1	V	Y	N
METHYLNAPHTHALENE, [2-]	91-57-6	0.01	V	Y	N
MINERAL FIBERS		0	T	N	Y
NAPHTHALENE	91-20-3	10	V	Y	N
NAPHTHYLAMINE, [ALPHA-]	134-32-7	0.01	V	Y	N
NAPHTHYLAMINE, [BETA-]	91-59-8	0.01	V	Y	N
NICKEL CARBONYL	13463-39-3	0.1	U	N	Y
NICKEL COMPOUNDS		1	U	N	Y
NICKEL REFINERY DUST		0.08	U	N	Y
NICKEL SUBSULFIDE	12035-72-2	0.04	U	N	Y
NITROBENZENE	98-95-3	1		Y	N
NITROBIPHENYL, [4-]	92-93-3	1	V	Y	N
NITROPHENOL, [4-]	100-02-7	5		Y	N
NITROPROPANE, [2-]	79-46-9	1		Y	N
NITROSODIMETHYLAMINE, [N-]	62-75-9	0.001		Y	N
NITROSOMORPHOLINE, [N-]	59-89-2	1		Y	N
NITROSO-N-METHYLUREA, [N-]	684-93-5	0.0002		Y	N
OCTACHLORONAPTHALENE	2234-13-1	0.01	V	Y	N
PARATHION	56-38-2	0.1		Y	Y
PCB [POLYCHLORINATED BIPHENYLS]	1336-36-3	0.009	X	Y	Y
PENTACHLORONITROBENZENE	82-68-8	0.3		Y	N
PENTACHLOROPHENOL	87-86-5	0.7		Y	N
PHENOL	108-95-2	0.1		Y	N
PHENYLENEDIAMINE, [PARA-]	106-50-3	10		Y	N
PHOSGENE	75-44-5	0.1		Y	N
PHOSPHINE	7803-51-2	5		N	N
PHOSPHOROUS (YELLOW OR WHITE)	7723-14-0	0.1		N	N
PHTHALIC ANHYDRIDE	85-44-9	5		Y	N
POLYCYLIC ORGANIC MATTER		0.01	V	Y	N
PROPANE SULTONE, [1,3-]	1120-71-4	0.03		Y	Y
PROPIOLACTONE, [BETA-]	57-57-8	0.1		Y	N
PROPIONALDEHYDE	123-38-6	5		Y	N
PROPOXUR [BAYGON]	114-26-1	10		Y	Y
PROPYLENE OXIDE	75-56-9	5		Y	N
PROPYLENEIMINE, [1,2-]	75-55-8	0.003		Y	N
QUINOLINE	91-22-5	0.006		Y	N
QUINONE	106-51-4	5		Y	N
RADIONUCLIDES		Note 1	Y	N	Y
SELENIUM COMPOUNDS		0.1	W	N	Y
STYRENE	100-42-5	1		Y	N
STYRENE OXIDE	96-09-3	1		Y	N
TETRACHLORODIBENZO-P-DIOXIN,[2,3,7,8]	1746-01-6	6E-07	D,V	Y	Y
TETRACHLOROETHANE, [1,1,2,2-]	79-34-5	0.3		Y	N
TETRACHLOROETHYLENE	127-18-4	10		N	N
TITANIUM TETRACHLORIDE	7550-45-0	0.1		N	N
TOLUENE	108-88-3	10		Y	N
TOLUENE DIISOCYANATE, [2,4-]	584-84-9	0.1		Y	N
TOLUIDINE, [ORTHO-]	95-53-4	4		Y	N
TOXAPHENE	8001-35-2	0.01		Y	N
TRICHLOROBENZENE, [1,2,4-]	120-82-1	10		Y	N
TRICHLOROETHANE, [1,1,1-]	71-55-6	10		N	N
TRICHLOROETHANE, [1,1,2-]	79-00-5	1		Y	N
TRICHLOROETHYLENE	79-01-6	10		Y	N
TRICHLOROPHENOL, [2,4,5-]	95-95-4	1		Y	N
TRICHLOROPHENOL, [2,4,6-]	88-06-2	6		Y	N
TRIETHYLAMINE	121-44-8	10		Y	N
TRIFLURALIN	1582-09-8	9		Y	Y
TRIMETHYLPENTANE, [2,2,4-]	540-84-1	5		Y	N
URETHANE [ETHYL CARBAMATE]	51-79-6	0.8		Y	N
VINYL ACETATE	108-05-4	1		Y	N
VINYL BROMIDE	593-60-2	0.6		Y	N
VINYL CHLORIDE	75-01-4	0.2		Y	N
XYLENE, [META-]	108-38-3	10	G	Y	N
XYLENES (MIXED ISOMERS)	1330-20-7	10	G	Y	N

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Appendix B- Air Pollution Control Program
Table of Hazardous Air Pollutants and Screening Model Action Levels

Legend	
Group ID	
A	Asbestos
B	Cresols/Cresylic Acid (isomers and mixtures)
C	2,4 - D, Salts and Esters
D	Dibenzofurans, Dibenzodioxins
E	4, 6 Dinitro-o-cresol, and Salts
F	Lindane (all isomers)
G	Xylenes (all isomers and mixtures)
H	Antimony Compounds
I	Arsenic Compounds
J	Beryllium Compounds
K	Cadmium Compounds
L	Chromium Compounds
M	Cobalt Compounds
N	Coke Oven Emissions
O	Cyanide Compounds
P	Glycol Ethers
Q	Lead Compounds (except elemental Lead)
R	Manganese Compounds
S	Mercury Compounds
T	Fine Mineral Fibers
U	Nickel Compounds
V	Polycyclic Organic Matter
W	Selenium Compounds
X	Polychlorinated Biphenyls (Aroclors)
Y	Radionuclides
Notes	The SMAL for radionuclides is defined as the effective dose equivalent to 0.3 millirems per year for 7 years exposure associated with a cancer risk of 1 in 1 million

Appendix C
Potential Emission Calculations

Table 1 - Flat Body Construction

Potential Emissions Calculations
Summary Emissions

Company Name: Reading Midwest Distribution, LLC
Source Address : 235 N. Service Rd., St. Clair, MO 63077

Unlimited Potential to Emit Before Controls (tons/year)[1,3]

Emission Units	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Highest Single HAP	
Welding Operations	6.15	6.15	6.15	-	-	-	-	0.33	-	-
Paint Preparation	0.00	0.00	0.00	-	-	0.38	-	0.37	0.00	Toluene
Undercoating Application	121.40	121.40	121.40	-	-	6.06	-	-	-	-
Primer and Topcoat Application	134.22	134.22	134.22	-	-	403.30	-	34.71	20.94	Toluene
Natural Gas Combustion Units Including Drying Oven	0.06	0.26	0.26	0.02	3.42	0.19	2.87	0.06	1.16E-04	Toluene
Final Assembly Operation	0.19	0.19	0.19	-	-	23.63	-	1.12	0.00	Toluene
Total PTE	**262.02**	**262.22**	**262.22**	**0.03**	**3.42**	**433.57**	**2.88**	**36.60**	**20.95**	**Toluene**
Projected Actual	**59.82**	**59.87**	**59.87**	**0.01**	**0.78**	**98.99**	**0.66**	**8.36**	**4.78**	**Toluene**

Unlimited Potential to Emit After Controls (tons/year)[1,3]

Emission Units	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Highest Single HAP	
Welding Operations	6.15	6.15	6.15	-	-	-	-	0.33	-	-
Paint Preparation	0.00	0.00	0.00	-	-	0.38	-	0.37	0.00	Toluene
Undercoating Application	6.07	6.07	6.07	-	-	6.06	-	-	-	-
Primer and Topcoat Application	6.71	6.71	6.71	-	-	403.30	-	34.71	20.94	Toluene
Natural Gas Combustion Units Including Drying Oven	0.06	0.26	0.26	0.02	3.42	0.19	2.87	0.06	1.16E-04	Toluene
Final Assembly Operation	0.19	0.19	0.19	-	-	23.63	-	1.12	0.00	Toluene
Total PTE	**19.18**	**19.37**	**19.37**	**0.02**	**3.42**	**433.56**	**2.87**	**36.59**	**20.94**	**Toluene**
Projected Actual	**4.38**	**4.42**	**4.42**	**0.00**	**0.78**	**98.99**	**0.66**	**8.35**	**4.78**	**Toluene**

[1]Controls are low temperature, dry fabric filters
[2] All HAPs are included in the VOC emissions.
[3] All volatile emissions are based on mass balance calculations, welding and natural gas combustion emissions are based on AP-42 emission factors.

Table 2 - Flat Body Construction

Potential Emissions Calculations
HAP and Particulate
Welding Operations

Company Name: Reading Midwest Distribution, LLC
Source Address : 235 N. Service Rd., St. Clair, MO 63077

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	Pounds Electrode per Hour	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
WELDING				PM - PM10	Mn	Ni	Co	Cr	PM - PM10	Mn	Ni	Co	Cr	
Assembly Welding Metal Inert Gas (MIG)(E70S)	8	[illegible]	229.36	0.00520	0.000318	1.00E-05	1.00E-05	1.00E-05	1.192672	0.072936	0.000229	0.000229	0.000229	0.07352
Final Welding Metal Inert Gas (MIG)(ER5XXX)	2	19.55	39.10	0.00540	0.000034	0.00E+00	0.00E+00	1.00E-05	0.211140	0.001329	-	-	0.000391	0.00172
EMISSION TOTALS														
Potential Emissions lbs/hr									[illegible]					
Potential Emissions lbs/day									[illegible]					
Potential Emissions tons/year									[illegible]					

METHODOLOGY
Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.
*Emission Factors from AP-42 Table 12.19-2 (HAP Emission Factors for Welding Operations) and are default values for carbon steel unless a specific electrode type is noted in the Process column.

Welding SCC# 3-09-052-64

Appendix C
Potential Emission Calculations

Table 3 - Flat Body Construction

Potential Emissions Calculations
VOC, HAP and Particulate
From Surface Coating Operations
Paint Preparation

Company Name: Reading Midwest Distribution, LLC
Source Address: 235 N. Service Rd., St. Clair, MO 63077

Material	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gal/on of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency (HVLP = 75%, Coventional Spray and Aerosol = 50%, Airless Spray = 65%, Flushing, Brush, Manual = 100%)
3M All-Around Autobody Sealant	PN08500	10.34	0.97%	98.00%	1.03%	99.00%	1.00%	0.02	2.0	0.2	0.1	0.09	2.06	0.38	0.00	0.19	100%
Potential to Emit Before Controls												0.09	2.06	0.38	0.00		
Control Efficiency - No Controls												0.00%	0.00%	0.00%	0.00%		
Potential to Emit After Controls												0.09	2.06	0.38	0.00		

METHODOLOGY
Manual application (brush and caulk tubes)
Polyester Glazing Putty - VOC Content as Applied with Hardener
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Potential to Emit After Controls = Potential to Emit Before Controls x (1-Control Efficiency%)

VOLATILE HAZARDOUS AIR POLLUTANTS:

Material	Description	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum Throughput (units/hr)	Weight % DEHP	PTE DEHP (tons/yr)	Weight % Formaldehyde	PTE Formaldehyde (tons/yr)	Weight % Styrene	PTE Styrene (tons/yr)	Weight % Toluene	PTE Toluene (tons/yr)	Weight % Xylene	PTE Xylene (tons/yr)	PTE Total HAP (tons/yr)
3M All-Around Autobody Sealant	PN08500	10.34	0.02	2.00	0.00%	0.00	1.00%	0.37	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.37
Total						0.000		0.37		0.00		0.00		0.000	0.37

METHODOLOGY
PTE HAPs (tons/yr) = Density (lbs/gal) * Gal of Material (gal/unit) * Maximum Throughput (units/hr) * Weight % HAP * 8,760 hrs/yr * 1 ton/2,000 lbs

Misc. VOC; SCC# 4-90-999-98

Annual Throughput

Material	Throughput	DEHP	Formaldehyde	Styrene	Toluene	Xylene
	(lb/year)	(lb/year)	(lb/year)	(lb/year)	(lb/year)	(lb/year)
3M All-Around Autobody Sealant	16,680.34	0.00	166.80	0.00	0.00	0.00
Totals		0.00	166.80	0.00	0.00	0.00

Appendix C
Potential Emission Calculations

Table 4 - Flat Body Construction

Potential Emissions Calculations
VOC, HAP and Particulate
From Surface Coating Operations
Undercoating Operations

Company Name: Reading Midwest Distribution, LLC
Source Address: 235 N. Service Rd., St. Clair, MO 63077

Material	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency (H-V/LP = 75%, Conventional Spray and Aerosol = 50%, Airless Spray = 65%, Flashing, Brush, Manual = 100%)
Transcoat 801	Undercoating	8.00	20.00	80.00	1.00%	90.00%	10.00%	0.20	1.00	0.2	0.1	1.38	33.20	6.05	121.40	0.83	65%
Potential to Emit Before Controls												1.38	33.20	6.05	121.40		
Control Efficiency for Dry Filters												0.00%	0.00%	0.00%	95.00%		
Potential to Emit After Controls												1.38	33.20	6.05	6.07		

METHODOLOGY
Airless spray
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Potential to Emit After Controls = Potential to Emit Before Controls x (1-Control Efficiency%)

VOLATILE HAZARDOUS AIR POLLUTANTS

METHODOLOGY
Material does not contain hazardous air pollutants.

Undercoating; SCC#-4-02-002-01

Appendix C
Potential Emission Calculations

Table 5 - Flat Body Construction

Potential Emissions Calculations
VOC, HAP and Particulate
From Surface Coating Operations
Primer and Topcoat Operations

Company Name: Reading Midwest Distribution, LLC
Source Address : 235 N. Service Rd., St. Clair, MO 63077

Material	Description	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency (HVLP = 75%, Conventional Spray and Aerosol = 50%, Airless Spray = 65%, Flocking, Brush, Manual = 100%)
EU-Topcoat																	
GC Series - Black	GC1738FS	[illegible]	[illegible]	[illegible]	42.39%	[illegible]	[illegible]	[illegible]	[illegible]	3.5	3.5	36.47	875.27	159.74	54.27	6.67	75%
GR1070	Genesis Reducer	[illegible]	[illegible]	[illegible]	100.00%	[illegible]	[illegible]	[illegible]	[illegible]	7.4	7.4	27.72	665.31	121.42	0.00	#DIV/0!	75%
GH1091	Gennis Hardner X521	[illegible]	[illegible]	[illegible]	25.10%	[illegible]	[illegible]	[illegible]	[illegible]	2.3	2.3	7.95	190.93	34.85	26.00	3.27	75%
GA1097	Gennis Accelerator	[illegible]	[illegible]	[illegible]	93.90%	[illegible]	[illegible]	[illegible]	[illegible]	8.0	8.0	2.51	60.32	11.01	0.03	804.05	75%
EU-Prime																	
E2A933	Epoxy Primer Gray X503	[illegible]	[illegible]	[illegible]	18.70%	[illegible]	[illegible]	[illegible]	[illegible]	2.7	2.2	11.71	281.06	51.29	49.03	4.42	75%
V6V943	Epoxy Hardner/Accelerator	[illegible]	[illegible]	[illegible]	56.10%	[illegible]	[illegible]	[illegible]	[illegible]	4.4	4.4	5.71	136.96	25.00	4.89	10.61	75%
VS100	VOC Solvent, Fast	[illegible]	[illegible]	[illegible]	0.00%	[illegible]	[illegible]	[illegible]	[illegible]	#DIV/0!	0.0	0.00	0.00	0.00	0.00	#DIV/0!	75%
Potential to Emit Before Controls												[illegible]	[illegible]	[illegible]	[illegible]		
Control Efficiency for Dry Filters												[illegible]	[illegible]	[illegible]	[illegible]		
Potential to Emit After Controls												[illegible]	[illegible]	[illegible]	[illegible]		

METHODOLOGY

Conventional spray and manual cleaning

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)

Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

Potential to Emit After Controls = Potential to Emit Before Controls x (1-Control Efficiency%)

VOLATILE HAZARDOUS AIR POLLUTANTS

Material	Description	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum Throughput (units/hr)	Weight % Glycol Ethers	PTE Glycol Ethers (tons/yr)	Weight % MIBK	PTE MIBK (tons/yr)	Weight % Toluene	PTE Toluene (tons/yr)	PTE Total HAP (tons/yr)
EU-Topcoat											
GC Series - Black	GC1738FS	[illegible]	[illegible]	[illegible]	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00
GR1070	Genesis Reducer	[illegible]	[illegible]	[illegible]	2.00%	2.43	0.00%	0.00	0.00%	0.00	2.43
GH1091	Gennis Hardner X521	[illegible]	[illegible]	[illegible]	4.00%	5.55	0.00%	0.00	0.00%	0.00	5.55
GA1097	Gennis Accelerator	[illegible]	[illegible]	[illegible]	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00
EU-Prime											
E2A933	Epoxy Primer Gray X503	[illegible]	[illegible]	[illegible]	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00
V6V943	Epoxy Hardner/Accelerator	[illegible]	[illegible]	[illegible]	0.00%	0.00	13.00%	5.79	47.00%	20.94	26.73
VS100	VOC Solvent, Fast	[illegible]	[illegible]	[illegible]	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00
Total						7.98		5.79		20.94	34.71

METHODOLOGY

PTE HAPs (tons/yr) = Density (lbs/gal) * Gal of Material (gal/unit) * Maximum Throughput (units/hr) * Weight % HAP * 8,760 hrs/yr * 1 ton/2,000 lbs

Primer, SOC# 4-02-006-01
Basecoat, SOC# 4-02-001-01

Annual Throughput

Material	Throughput (lb/year)	Glycol Ethers (lb/year)	MIBK (lb/year)	Toluene (lb/year)
EU-Topcoat				
GC Series - Black	172,067.54	0.00	0.00	0.00
GR1070	55,442.74	1,108.85	0.00	0.00
GH1091	63,391.11	2,535.64	0.00	0.00
GA1097	5,082.88	0.00	0.00	0.00
Totals		3,644.60	0.00	0.00
EU-Prime				
E2A933	125,248.40	0.00	0.00	0.00
V6V943	20,345.05	0.00	2,644.86	9,562.17
VS100	17,166.95	0.00	0.00	0.00

Appendix C
Potential Emission Calculations

Table 6 - Flat Body Construction

Potential Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Reading Midwest Distribution, LLC
Source Address : 235 N. Service Rd., St. Clair, MO 63077

ID	# of units	Heat Input Capacity MMBtu/hr each	Heat Input Capacity MMBtu/hr Total	Stack ID	Stack Height (ft)	Stack Diameter (ft)[1]	Temperature (F)[1]	Velocity (ft/min)[1]	Flow Rate (cfm)[1]
Boiler 1	1	4.50	4.500	B1S	24.5	1.50	350	1,698	3,000
Boiler 2	1	0.15	0.150	B2S	24.5	0.83	275	2,310	1,250
Water Heater	1	0.034	0.034	WHS	24.5	0.50	275	5,093	1,000
Batch Drying Oven	1	1.6	1.600	DOS	24.5	1.50	300	1,415	2,500
Space Heaters	4	0.15	0.600	SH1S-SH4S	24.5	0.83	275	2,310	1,250
Space Heaters	2	0.18	0.360	SH5S, SH6S	24.5	0.83	275	2,310	1,250
Space Heaters	3	0.24	0.720	SH7S-SH9S	24.5	0.83	275	2,310	1,250
		Total	**7.964**	**Equivalent**	**24.5**	**0.92**	**289**	**17,446**	**11,500**

[1]Based upon general engineering estimates

mmscf	
7.020	88.4

	Pollutant						
Emission Factor in lb/MMCF	PM* 1.9	PM10* 7.6	direct PM2.5* 7.6	SO2 0.6	NOx 100 **see below	VOC 5.5	CO 84
Potential Emission in tons/yr	0.06	0.26	0.26	0.02	3.42	0.19	2.87

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Total - Organics
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	7.2E-05	4.1E-05	2.6E-03	0.06	1.2E-04	0.06

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	Total - Metals
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	1.7E-05	3.8E-05	4.8E-05	1.3E-05	7.2E-05	1.9E-04
					Total HAPs	0.06
					Worst HAP	0.06

Methodology is the same as above.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix C
Potential Emission Calculations

Table 7 - Flat Body Construction

Potential Emissions Calculations
VOC, HAP and Particulate
From Surface Coating Operations
Final Assembly

Company Name: Reading Midwest Distribution, LLC
Source Address : 235 N. Service Rd., St. Clair, MO 63077

Material	Description	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water & Exempt	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency (HVLP = 75%, Conventional Spray and Aerosol = 50%, Airless Spray = 65%, Flushing, Brush, Manual = 100%)
Non-Skid Urethane Black	88803	[illegible]	[illegible]	[illegible]	15.25%	[illegible]	[illegible]	[illegible]	[illegible]	1.9	1.9	4.21	101.10	18.45	0.00	2.53	[illegible]
Crest Engine Enamel	AM-2	[illegible]	[illegible]	[illegible]	56.00%	[illegible]	[illegible]	[illegible]	[illegible]	6.4	3.8	1.18	28.40	5.18	0.19	32.00	[illegible]
Potential to Emit Before Controls												[illegible]	[illegible]	[illegible]	[illegible]		
Control Efficiency - No Controls												[illegible]	[illegible]	[illegible]	[illegible]		
Potential to Emit After Controls												[illegible]	[illegible]	[illegible]	[illegible]		

METHODOLOGY
Manual application (Brush and caulk tubes)
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) * (8760 hrs/yr) * (1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Potential to Emit After Controls = Potential to Emit Before Controls x (1-Control Efficiency%)

VOLATILE HAZARDOUS AIR POLLUTANTS

Material	Description	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum Throughput (units/hr)	Weight % Ethyl Benzene	PTE Ethyl Benzene (tons/yr)	Weight % Toluene	PTE Toluene (tons/yr)	Weight % Xylene	PTE Xylene (tons/yr)	PTE Total HAP (tons/yr)
Non-Skid Urethane Black	88803	[illegible]	[illegible]	[illegible]	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00
Crest Engine Enamel	AM-2	[illegible]	[illegible]	[illegible]	2.00%	0.19	0.00%	0.00	10.00%	0.93	1.12
Total						0.19		0.00		0.93	1.12

METHODOLOGY
PTE HAPs (tons/yr) = Density (lbs/gal) * Gal of Material (gal/unit) * Maximum Throughput (units/hr) * Weight % HAP * 8,760 hrs/yr * 1 ton/2,000 lbs

Spray Paints; SCC# 4-02-006-01
Sealant; SCC# 4-90-999-98

Annual Throughput

Material	Throughput (lb/year)	Ethyl Benzene (lb/year)	Toluene (lb/year)	Xylene (lb/year)
Non-Skid Urethane Black	55,245.80	0.00	0.00	0.00
Crest Engine Enamel	4,226.35	84.53	0.00	422.64
Totals		84.53	0.00	422.64

Appendix D
VOC Tracking Methodology and Emission Factors

VOC Calculation Methodology for Paint Prep, Undercoating, Prime/Topcoat, Final Assembly

VOC emissions from the coatings shall be calculated using mass balances assuming that all of the VOC in the coating is emitted. If a range of VOC content is given in the safety data sheets (SDS), the higher value shall be used.

If coating totals are in gallons:

VOC Emissions (tons) = Material used (gallons) * Density of material (lbs. /gal) * VOC content (%)* (1 ton / 2000 lbs.)

If coating totals are in pounds:

VOC Emissions (tons) = Material used (lbs.)* VOC content (%)* (1 ton / 2000 lbs.)

VOC Calculation Methodology for Natural Gas Combustion:
(EU-Boiler 1 and 2; Space Heaters 1, 2, and 3; EU–Batch Drying Oven, EU-Water Heater)

The natural gas combustion emissions factor was taken from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03. The VOC emission factor for natural gas combustion is 5.5lb / MMCF.

VOC Emissions (tons) = Natural Gas Usage (MMCF) * 5.5 lb / MMCF * (1 ton / 2000 lbs.)

Instead of tracking actual monthly natural gas usage, monthly natural gas combustion emissions can be hard coded into the tracking sheets as 0.0158 ton of VOC per month.

Appendix E
HAP Tracking Methodology and Emission Factors

HAP Calculation Methodology for Welding

Individual HAP: Since all individual particulate HAPs are well below their respective SMALs, recordkeeping of individual particulate HAPs associated with welding for compliance with Special Condition 3.B is not needed.

Combined HAPs:

Welding emissions = # of stations * maximum lbs. of electrode used per hour per workstation * emission factor (lb. of pollutant / lb. of electrode used)

Instead of tracking actual monthly welding emissions, monthly welding emissions can be hard coded into the tracking sheets as 0.028 tons of Combined HAPs per month.

HAP Calculation Methodology for Paint Prep, Undercoating, Prime/Topcoat, Final Assembly

Individual HAP emissions from the coatings shall be calculated using mass balances assuming that all of the volatile HAP in the coating is emitted. If a range of HAP content is given in the safety data sheets (SDS), the higher value shall be used.

If coating totals are in gallons:

Individual HAP Emissions (tons) = Material used (gallons) * Density of material (lbs. /gal) * Individual HAP content (%)* (1 ton / 2000 lbs.)

If coating totals are in pounds:

Individual HAP Emissions (tons) = Material used (lbs.)* HAP content (%)* (1 ton / 2000 lbs.)

HAP Calculation Methodology for Natural Gas Combustion:

(EU-Boiler 1 and 2; Space Heaters 1, 2, and 3; EU–Batch Drying Oven, EU-Water Heater)

The natural gas combustion emissions factor was taken from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03. The VOC emission factor for natural gas combustion is 5.5lb / MMCF.

Individual HAP: Since all individual HAPs associated with combustion are well below their respective SMALs, recordkeeping of individual HAPs associated with combustion for compliance with Special Condition 3.B is not needed.

Combined HAPs:

Combined HAP Emissions (tons) = Natural Gas Usage (MMCF) * 1.89 lb / MMCF * (1 ton / 2000 lbs.)

Instead of tracking actual monthly natural gas usage, monthly natural gas combustion emissions can be hard coded into the tracking sheets as 0.005 ton of HAP per month.

Missouri Department of dnr.mo.gov
NATURAL RESOURCES
Eric R. Greitens, Governor Carol S. Comer, Director

DEC 1 2 2017

Mr. Bob Waugaman
Regional Manager of Environment, Health and Safety
Reading Midwest Distribution, LLC
825 E. Wyoming Blvd.
Reading, PA 19611

RE: New Source Review Permit - Project Number: 2017-04-001

Dear Mr. Waugaman:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: http://dnr.mo.gov/regions/. The online CAV request can be found at http://dnr.mo.gov/cav/compliance.htm.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.oa.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Jordan Hull, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:jhj

Enclosures

c: St. Louis Regional Office
PAMS File: 2017-04-001

Permit Number: 122017-003