

**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: 082018-014

Project Number: 2018-06-042  
Installation Number: 157-0019

Parent Company: TG Missouri Corporation

Parent Company Address: 2200 Plattin Road, Perryville, MO 63775

Installation Name: TG Missouri Corporation

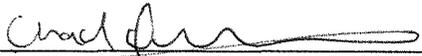
Installation Address: 2200 Plattin Road, Perryville, MO 63775

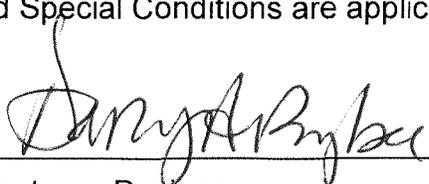
Location Information: Perry County, S84, T35N, R10E

Application for Authority to Construct was made for:  
Automated Paint Spray Booth. 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.

  
Prepared by  
Chad Stephenson  
New Source Review Unit

  
Director or Designee  
Department of Natural Resources

AUG 29 2018

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."*

TG Missouri Corporation  
 Perry County, S84, T35N, R10E

1. Superseding Condition  
 Special Condition 2 of this permit supersedes Special Condition 2.A. found in the previously issued construction permit 072017-007 issued by the Air Pollution Control Program.
  
2. Emission Limitations
  - A. Plant-wide
    - 1) TG Missouri Corporation shall emit less than 10.0 tons individually and 25.0 tons combined of HAPs in any consecutive 12-month period from the entire installation (see table 1 for a list of all HAP emission points).

Table 1: Installation HAP Emission Points

Emission Point	Description
EP-255	Caterpillar 3306 Emergency Generator
EP-254	Cummins 6CTA8.3-G2 Emergency Generator
EP-253	HCL Tank
EP-252	P-25 Paint Kitchen
EP-251	P-25 Cooling Zone Exhaust
EP-250	P-25 Cure Oven Exhaust
EP-249	P-25 Clear Coat Booth Stack 1
EP-248	P-25 Base Coat Booth Stack 1
EP-247	P-23 Paint Kitchen
EP-246	P-23 Cooling Zone Exhaust
EP-245	P-23 Cure Oven Exhaust
EP-243	P-23 Clear Coat Booth Stack 1
EP-241	P-23 Base Coat Booth Stack 1
EP-240	Kaizen Booth Paint System
EP-238	PMF4 Decorative chrome plating
EP-237	PMF4 Nickel plating
EP-235	PMF4 Hydrochloric acid catalyst
EP-234	PMF4 Chrome etching
EP-232	PMF3 Decorative chrome plating
EP-231	PMF3 Nickel plating
EP-229	PMF3 Hydrochloric acid catalyst
EP-228	PMF3 Chrome Etching
EP-227	Blackout Booth Paint System
EP-226	CST Process film activator
EP-224	PMF2 Decorative chrome plating
EP-223	PMF2 Nickel plating

**SPECIAL CONDITIONS:**

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

Emission Point	Description
EP-221	PMF2 Hydrochloric acid catalyst
EP-220	PMF2 Chrome etching
EP-216 through 212	PB20 Paint System
EP-210	PMF1 Decorative Chrome Plating
EP-209	PMF1 Nickel Plating
EP-207	PMF1 Hydrochloric acid catalyst
EP-206	PMF1 Chrome Etching
EP-197 through 205	Robotic Paint Booth (P-12)
EP-194 through 196	Robotic Paint Booth (P-11)
EP-188 through 193	Robotic Paint Booth (P-10)
EP-171 through 183	Robotic Paint Booth (P-9)
EP-170	Boiler
EP-169	Printing
EP-168	Transfer Of Dry Raw Material
EP-167	Fluidized Bed
EP-165 through 166	Saturn Outerbelt Line
EP-164	Shot Blasting
EP-163	Magnesium Die Casting Furnace
EP-155 through 162	Air Bag Robotic Paint Booth (P-14)
EP-149 through 154	Air Bag Robotic Paint Booth (P-6)
EP-144 through 148	Air Bag Robotic Paint Booth (P-5)
EP-137 through 143	Air Bag/Column Cover Paint Booth (P-4)
EP-132 through 136	Mudguard Paint Booth (P-3)
EP-126 through 131	Back Panel (Rear Garnish) Paint Booth (P-2)
EP-116 through 125	Water Heaters
EP-090 through 115	Space Heaters
EP-085	Shot Blasting
EP-084	Aluminum Pouring/Casting
EP-083	Aluminum Die Cast Melting Furnaces (3)
EP-080 through 082	Building 1 Paint Booth (P-18)
EP-079	PVC Degreaser #2
EP-062 through 063	Paint Booth (P-8)
EP-001 through 059	Polyurethane

- 2) TG Missouri Corporation shall develop and use an electronic database, electronic forms or written forms to demonstrate compliance with Special Conditions 2.A.1). The database/forms shall contain at a minimum the following information,
- a) Installation name
  - b) Installation ID
  - c) Permit number
  - d) Current month
  - e) Current 12-month date range
  - f) Each emission unit in Table 1
  - g) Monthly throughput for each emission unit in Table 1

**SPECIAL CONDITIONS:**

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

- h) Emission unit's respective emission factors, and source.
  - (i) For coating, HAP content obtained from the most recent Certified Product Data Sheet (CPDS) or SDS assuming 100% of volatile HAPs, except HDI, are emitted.
  - (ii) For coatings, HDI emission usage in pounds equals 0.076 lb HDI / lb of HDI sprayed
  - (iii) For coatings, particulate matter HAPs apply an overall control efficiency equal to the permitted control efficiency. Keep a reference of the permitted control efficiency
  - (iv) For chromium emissions use permitted emission factor from 40 CFR 63 Subpart N or AP-42 Section 12.20 Electroplating, respectively
  - (v) For natural gas combustion use emission factors from AP-42 Section 1.4 Natural Gas Combustion
  - (vi) For storage tanks containing materials with HAPs use equations from AP-42 Section 7.1 Organic Liquid Storage Tanks
  - (vii) For Nickel Plating Tanks use emission factor from EPA WebFIRE, <https://www3.epa.gov/ttn/chief/webfire/index.html> for SCC 30901068
  - (viii) For emergency generators less than or equal to 600 HP use emission factors from AP-42 Section 3.3 Gasoline and Diesel Industrial Engines
  - (ix) For emergency generators greater than 600 HP use emission factors from AP-42 Section 3.4 Large Stationary Diesel and All Stationary Dual-fuel Engines
  - (x) For other HAP emission units calculate using the following equation:

*HAP emissions (tons)*

*= Throughput*

*× Emission unit and individual HAP respective emission factor with source*  $\left( \frac{\text{lb HAP}}{\text{throughput}} \right)$

*×*  $\left( \frac{1 \text{ ton HAP}}{2000 \text{ lbs HAP}} \right)$

**SPECIAL CONDITIONS:**

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

- i) Monthly individual HAP emissions calculated by summing the individual HAP emission from all emission units in Table 1
- j) 12-month rolling total individual HAP emissions from all emission units in Table 1, and the sum of all individual HAP emissions from startup, shutdown, and malfunction as reported to the Air Pollution Control Program's Compliance/Enforcement Section according to the provisions of 10CSR 10-6.050
- k) Monthly combined HAP emissions calculated by summing all individual HAP emissions from all emission units in Table 1
- l) 12-month rolling total combined HAP emissions from all emission units in Table 1, and the sum of all combined HAP emissions from startup, shutdown, and malfunction as reported to the Air Pollution Control Program's Compliance/Enforcement Section according to the provisions of 10 CSR 10-6.050
- m) Indication of compliance status with Special Condition 2.A.1)

**B. Unit Specific**

- 1) TG Missouri Corporation shall emit less than 40.0 tons of Volatile Organic Compounds in any consecutive 12-month period from the emission units listed in Table 2.
- 2) TG Missouri Corporation shall emit less than 10.0 tons of PM<sub>2.5</sub> in any consecutive 12-month period from the emission units listed in Table 2.
- 3) TG Missouri Corporation shall emit less than the Screening Model Action Level (SMAL) of each HAP in any consecutive 12-month period from the emission units listed in Table 2. (See Appendix B or online at <http://dnr.mo.gov/env/apcp/docs/cp-hapraltbl6.pdf> for SMAL values)

Table 2: Emission Units associated with construction permit

Emission Point	Description
EP-252	P-25 Paint Kitchen
EP-251	P-25 Cooling Zone Exhaust
EP-250	P-25 Cure Oven Exhaust
EP-249	P-25 Clear Coat Booth Stack 1
EP-248	P-25 Base Coat Booth Stack 1

- 4) Attachments A, B, and C or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 2.B.

**SPECIAL CONDITIONS:**

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

3. Control Device Requirement – Water Wall
  - A. TG Missouri Corporation shall control particulate matter emissions from EP-248 and EP-249 using a water wall as specified in the permit application.
  - B. The water wall shall be operated and maintained in accordance with the manufacturer's specifications. TG Missouri Corporation shall maintain the operating pressure drop within the design conditions specified by the manufacturer's performance warranty. The water wall shall be equipped with a pressure switch which will automatically shut down the booth if the pressure is outside of the manufacturer's recommended operational range.
  - C. The water wall shall be inspected for complete coverage before each shift.
  - D. TG Missouri Corporation shall maintain a copy of the water wall's manufacturer's performance warranty on site.
  - E. TG Missouri Corporation shall maintain an operating and maintenance log for the control device 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.

**SPECIAL CONDITIONS:**

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

4. Capture Device Requirement – EP-248 and EP-249
  - A. All doors and windows of the booths shall be closed during operation.
  - B. TG Missouri Corporation shall verify the proper operation of each paint booth with an air intake that is equipped with a pressure switch that will automatically shut down the booths if the makeup air is insufficient.
  - C. TG Missouri Corporation shall design and construct each paint booth according to the Occupational Safety and Health Administration (OSHA) requirements, 29 CFR 1910.94(c)(6) *Velocity and air flow requirements*.
  - D. TG Missouri Corporation shall demonstrate that each paint booth was constructed according to Special Condition 4.C. by keeping a record of the following design parameters:
    - a) the minimum recommended face velocity
    - b) engineering drawings which demonstrate that the spray booth was designed to meet the minimum face velocity
5. Use of Alternative Coating in the Paint System
  - A. When considering using an alternative coating that is different than a material listed in the Application for Authority to Construct, TG Missouri Corporation shall follow the emission limitations in Special Condition 2.B.
6. Record Keeping and Reporting Requirements
  - A. TG Missouri Corporation 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. TG Missouri Corporation shall report to the Air Pollution Control Program's Compliance/Enforcement Section, by mail at P.O. Box 176, Jefferson City, MO 65102 or by e-mail at [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov), 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 (5) REVIEW

Project Number: 2018-06-042  
Installation ID Number: 157-0019  
Permit Number: 082018-014

Installation Address:  
TG Missouri Corporation  
2200 Plattin Road  
Perryville, MO 63775

Parent Company:  
TG Missouri Corporation  
2200 Plattin Road  
Perryville, MO 63775

Perry County, S84, T35N, R10E

REVIEW SUMMARY

- TG Missouri Corporation has applied for authority to install a new automated paint spray booth.
- The application was deemed complete on July 11, 2018.
- HAP emissions are expected from the proposed equipment. HAPs emitted from the proposed equipment are Ethylbenzene (CAS 100-41-4), Xylene (CAS 1330-20-7), Toluene (CAS 108-88-3), Hexamethylene-1,6-Diisocyanate (CAS 822-06-0), Styrene (CAS 100-42-5), Methanol (CAS 67-56-1), Formaldehyde (CAS 50-00-0), Naphthalene (CAS 91-20-3), Benzene (CAS 71-43-2), and Cumene (CAS 98-82-8). Additional HAPs may be emitted in the future due to the use of alternative coatings. HAP emissions are limited to the SMALs.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment. MACT 6H may apply in the future due to alternative coatings.
- A water wall is being used to control the particulate matter emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions VOC and PM<sub>2.5</sub> have been conditioned below de minimis levels to avoid PSD.
- This installation is located in Perry County, an attainment/unclassifiable area for all 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 250 tons per year and fugitive emissions are not counted toward major source applicability.

- Ambient air quality modeling was not performed since potential emissions of the application are 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 Part 70 Operating Permit application is required for this installation within one year of equipment startup.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

TG Missouri Corporation manufactures plastic, rubber, and metal automobile parts and accessories including steering wheels, airbags and interior panels. TG Missouri Corporation is a major source (Part 70) under operating permits and major source under construction permits for volatile organic compounds (VOCs). The following permits have been issued to TG Missouri Corporation from the Air Pollution Control Program.

Table 3: Permit History

Permit Number	Description
0986-012A	Manufacturing of steel steering wheel & plastic governor gear
1187-009	Installation of parts molding operation
0290-003	Installation of six (6) polyurethane presses to mold air bag covers
0290-004	Installation of 14 polyurethane presses, a spray booth, and an adhesive coating machine
0590-006	Addition of painting equipment for side protection molding
0691-002	Installation of nine (9) polyurethane presses for molding air bag covers
0791-010	Installation of six (6) polyurethane steering wheel presses
0791-013	Installation of injection molding, aluminum die cast, and air bag assembly
0592-001	Installation of six (6) polyurethane steering wheel presses
0792-029	Installation of three (3) polyurethane steering wheel presses
0393-010	Installation of six (6) polyurethane presses and one (1) aluminum die cast furnace
0794-018	Installation of aluminum die casting, air bag assembly, polyurethane processing, and spray painting
0595-007	Addition of Injection molding equipment
1295-019	Installation of an air bag robotic paint booth
0396-005	Installation of magnesium die casting
0896-005	Installation of Saturn outer-belt process line
157-0019-0001	Part 70 operating permit
1297-018	Installation of two (2) magnesium die casting lines

Permit Number	Description
0298-014	Construction of six (6) new polyurethane paint booths
0998-006	Installation of four (4) polyurethane paint booths
042002-018	Installation of a robotic paint booth
082002-019	Paint booths
OP2008-022	Part 70 operating permit renewal
022009-011	Two automated spray booths and one chrome plating line (PMF1)
122010-014	CST Process and PMF2
012012-010	Installation of blackout paint booth
042012-008	Installation of compact plating system PMF3
042012-008A	True-up to actual
082014-016	New compact plating system PF4
122015-018	Construct a Kaizen Paint Booth System (EF-240)
072017-007	Paint Booth

### PROJECT DESCRIPTION

TG Missouri Corporation proposes to install one new automated paint spray booth designated as P-25. The paint system will be similar to others already in use at the facility for coating plastic automobile parts.

The P-25 system will be used to coat plastic automobile parts with solvent-based, low-HAP coatings. Parts are first loaded onto a conveyor by operators. The parts travel to a manual deionization/cleaning station. The parts then move through a robotic base coat spray booth. The base coat booth contains two robots with one spray gun each and emits through one of two exhaust emission points (EP-248). EP-248 operates at a maximum hourly design rate of 2.08 pounds per minute. The parts flash dry for two minutes and move to the robotic clear coat spray booth. The clear coat booth contains two robots with one spray gun each and emits through one of two exhaust emission points (EP-249). EP-249 operates at a maximum hourly design rate of 2.08 pounds per minute. The parts then flash off for 7 minutes at an ambient temperature and move through a 1 MMBtu/hr natural gas fired curing oven (EP-250) for 40 minutes. The parts then cool down in the cooling zone (EP-251) for 10 minutes and are manually unloaded by operators. A paints kitchen (EP-252) is used to mix paints for the P-25 system.

TG Missouri Corporation is requesting to use the following coatings in Paint Booth System P-25.

Table 4: Coating Requested for use in Paint Booth System P-25

Material ID	Emission Point
11GY45 Dark Grey Met	Base Coat Emission Points (EP-248)
Paint 530S 11BK01	
Thinner IBIB	
Clear EK-AJ3120	Clear Coat Emission Points (EP-249)
Hardener J3501	
DIBK Solvent	

The spray guns used in the system are high volume low pressure (HVLP) Sprimag Model LPA-200-122P. EP- 248 and EP-249 are controlled by a water wall. The overspray is collected at the bottom of the water wall and is pulled up the back section of the booth. The liquid and solids travel through a section of baffles which separate the solids from the air. A centrifuge spins the material and separates the solids and liquids. The solids (sludge) are collected in a basket and the water is sent back to the paint booth.

TG Missouri Corporation was issued construction permit 072017-007 for a similar paint booth, P-23, in July of 2017. Paint Line 23 paints parts for Toyota models Tacoma, Camry and Avalon. Pain Line 25 will be painting parts for new Toyota Highlander and Corolla models. It is the Air Pollution Control Program’s policy to make case-by-case determinations regarding project aggregation based on EPA’s guidance documents and PSD applicability determinations. TG Missouri Corporation provided the following answers regarding project aggregation:

- How close is the timing of the projects?
  - TG Missouri Corporation stated 2 years. The application for Construction permit 072017-007 was received on June 6, 2016. The application for this project was received on June 26, 2018.
- Are the projects economically and/or technically dependent on each other?
  - No – The projects support separate programs and part models.
- How related are the projects’ scopes (do they contribute to the same overall production goals?)
  - The projects support different automotive production models. Production requirements are based on each model sales.
- Are the projects funded or managed together or separately?
  - The projects are independent of each other.
- Does this project involve “relaxing” or removing permit conditions from earlier projects?
  - This project will not remove permit conditions from earlier projects.

Based on the above answers provided by TG Missouri Corporation, the new booth P-25 is by considered a separate project for this construction permit.

## EMISSIONS/CONTROLS EVALUATION

The emissions from the paint booth were calculated using the maximum paint usage and material safety data sheets (MSDS) supplied by TG. All available VOCs were considered to be emitted. All HAPs in this review are volatile HAPs and are also considered to be emitted. All particulate matter emissions were assumed to be less than 2.5 micrometers in diameter. Coating was assigned 20 percent solids transfer efficiency as reported from TG Missouri Corporation from similar process yields. Overspray solids are controlled by the water wall. Solids are captured by the booth at 100 percent efficiency and controlled by the water wall at 95 percent efficiency. All solids were considered PM, PM<sub>10</sub>, and PM<sub>2.5</sub>.

Potential HDI emissions were calculated using an emission factor obtained from the Ontario Ministry of the Environment document, *Determination of 1,6-Hexamethylene Diisocyanate (HDI) Emissions from Spray Booth Operations* (April, 2006).

The curing oven has a heat input capacity of 1.0 MMBtu/hr. Natural gas combustion emissions were calculated using AP-42 Section 1.4 "Natural Gas Combustion" (July 1998).

The following table provides an emissions summary for this project. Existing potential emissions were taken from Construction Permit 072017-007. Existing actual emissions were taken from the installation's 2017 EIQ. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year).

Table 5: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2017 EIQ)	Potential Emissions of the Project	New Installation Conditioned Potential
PM	25.0	N/D	N/D	<10.0	N/A
PM <sub>10</sub>	15.0	16.14	1.57	<10.0	N/A
PM <sub>2.5</sub>	10.0	13.00	1.50	<10.0	N/A
SOx	40.0	0.1423	0.02	0.0026	N/A
NOx	40.0	19.86	0.46	0.43	N/A
VOC	40.0	585.33	150.13	<40.0	N/A
CO	100.0	7.715	0.05	0.36	N/A
Combined HAPs	25.0	<25.0	2.32	< SMAL for each individual HAP	<25.0
Ethylbenzene (CAS 100-41-4)	10.0	<10.0	N/D	<10.0	<10.0
Xylene (CAS 1330-20-7)	10	<10.0	N/D	<10.0	<10.0
Toluene (CAS 108-88-3)	10	<10.0	N/D	<10.0	<10.0
Hexamethylene-1,6-Diisocyanate (CAS 822-06-0)	0.02	<0.02	N/D	<0.02	<10.0
Styrene (CAS 100-42-5)	1	<1.0	N/D	<1.0	<10.0
Methanol (CAS 67-56-1)	10	<10.0	N/D	<10.0	<10.0
Formaldehyde (CAS 50-00-0)	2	<2.0	N/D	<2.0	<10.0
Naphthalene (CAS 91-20-3)	10	<10.0	N/D	<10.0	<10.0
Benzene (CAS 71-43-2)	2	<2.0	N/D	<2.0	<10.0
Cumene (CAS 98-82-8)	10	<10.0	N/D	<10.0	<10.0

N/A = Not Applicable; N/D = Not Determined

## PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are conditioned below de minimis levels to avoid PSD.

## APPLICABLE REQUIREMENTS

TG Missouri Corporation 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. For a complete list of applicable requirements for your installation, please consult your operating permit.

## GENERAL REQUIREMENTS

- *Operating Permits*, 10 CSR 10-6.065
- *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.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *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 (5), 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 June 21, 2018, received June 26, 2018, designating TG Missouri Corporation as the owner and operator of the installation.

## OTHER RELIED UPON DOCUMENTS

- E-mail Communications between TG Missouri Corporation and the Missouri Air Pollution Control Program. This includes supplemental data submitted along with the e-mails.
- Paper titled "Determination of 1,6-Hexamethylene Diisocyanate (HDI) Emissions from Spray Booth Operations" (April 2006) Published by Ontario Ministry of the Environment

## Attachment A – Project VOC Compliance Worksheet

TG Missouri Corporation  
 Perry County, S84, T35N, R10E  
 Project Number: 2018-06-042  
 Installation ID Number: 157-0019  
 Permit Number: **082018-014**

<sup>1</sup> Name of Coating Used	Amount of Coating Used (Gallons)	<sup>2</sup> Density (lb/gal)	<sup>3</sup> VOC Content (Wt %)	<sup>4</sup> VOC Emissions (tons)
Total VOC Emissions from Natural Gas Combustion:				0.024
<sup>5</sup> Total VOC Emissions Calculated for this Month in tons:				
<sup>6</sup> 12-Month Rolling VOC Emissions Total from Previous Month's Attachment A, in tons:				
<sup>7</sup> Monthly VOC Emissions Total from Previous Year's Attachment A, in tons:				
<sup>8</sup> Current 12-month Rolling Total of VOC Emissions in tons:				

Note 1: Coating name  
 Note 2: Highest density as reported in the coatings SDS or MSDS.  
 Note 3: Highest VOC content as reported in the coatings SDS or MSDS.  
 Note 4: VOC Emissions (tons) = [Amount of Coating Used (gallons)] x [ Density (lb/gal)] x [VOC Content (Wt. %)] x 0.0005 tons/lb.  
 Note 5: Total VOC emissions from all coatings used and natural gas combustion.  
 Note 6: 12-Month Rolling VOC emissions total (tons) from last month's Attachment A, in tons;  
 Note 7: Monthly VOC emissions total (tons) from previous year's Attachment A, in tons;  
 Note 8: Calculate the new 12-month Rolling VOC emissions total by using [5]+[6]-[7]

**A 12-Month Rolling VOC emissions total of less than 40.0 tons indicates compliance.**

## Attachment B – Project PM<sub>2.5</sub> Compliance Worksheet

TG Missouri Corporation  
 Perry County, S84, T35N, R10E  
 Project Number: 2018-06-042  
 Installation ID Number: 157-0019  
 Permit Number: **082018-014**

<sup>1</sup> Name of Coating Used	Amount of Coating Used (Gallons)	<sup>2</sup> Density (lb/gal)	<sup>3</sup> Solids Content (Wt %)	<sup>4</sup> Control Efficiency (%)	<sup>5</sup> PM <sub>2.5</sub> Emissions (tons)
<b>Total PM<sub>2.5</sub> Emissions from Natural Gas Combustion:</b>					<b>0.033</b>
<b>Total PM<sub>2.5</sub> Emissions from Paint Kitchen EP-252</b>					
<b><sup>6</sup>Total PM<sub>2.5</sub> SSM Emissions in tons</b>					
<b><sup>7</sup>Total PM<sub>2.5</sub> Emissions Calculated for this Month in tons:</b>					
<b><sup>8</sup>12-Month Rolling PM<sub>2.5</sub> Emissions Total from Previous Month's Attachment A, in tons:</b>					
<b><sup>9</sup>Monthly PM<sub>2.5</sub> Emissions Total from Previous Year's Attachment A, in tons:</b>					
<b><sup>10</sup>Current 12-month Rolling Total of PM<sub>2.5</sub> Emissions in tons:</b>					

- Note 1: Coatings name
- Note 2: Highest density as reported in the coatings SDS or MSDS.
- Note 3: Highest Solids content as reported in the coatings SDS or MSDS = (100% - Volatile Content Weight %)
- Note 4: The overall PM control efficiency includes the HVLP transfer efficiency (20%), booth capture efficiency (100%), and water wall control efficiency (95%):  $20\% + (1 - 20\%) \times 100\% \times 95\% = 96\%$
- Note 5:  $PM_{2.5} \text{ Emissions (tons)} = [\text{Amount of Coating Used (gallons)}] \times [\text{Density (lb/gal)}] \times [\text{Solids Content (Wt. \%)}] \times 0.0005 \text{ tons/lb.}$
- Note 6: Calculate PM<sub>2.5</sub> emissions from the paint kitchen using emission factors in AP-42 Section 6.4 Paint and Varnish
- Note 7: Monthly PM<sub>2.5</sub> SSM Emissions (tons) = the sum of all PM<sub>2.5</sub> SSM emissions reported to the Air Pollution Control Program during the calendar month in accordance with 10 CSR 10-6.050. The installation shall retain documentation of all SSM reports and their supporting PM<sub>2.5</sub> SSM emissions calculations.
- Note 8: Total PM<sub>2.5</sub> emissions from all coatings used, natural gas combustion and SSM.
- Note 9: 12-Month Rolling PM<sub>2.5</sub> emissions total (tons) from last month's Attachment B, in tons;
- Note 10: Monthly PM<sub>2.5</sub> emissions total (tons) from previous year's Attachment B, in tons;
- Note 11: Calculate the new 12-month Rolling PM<sub>2.5</sub> emissions total by using [8]+[9]-[10]

**A 12-Month Rolling PM<sub>2.5</sub> emissions total of less than 10.0 tons indicates compliance.**

## Attachment C – Project – P-25 SMAL HAP Tracking Sheet

TG Missouri Corporation  
 Perry County, S84, T35N, R10E  
 Project Number: 2018-06-042  
 Installation ID Number: 157-0019  
 Permit Number: 082018-014

Date: \_\_\_\_\_  
 HAP Name: \_\_\_\_\_ CAS No: \_\_\_\_\_ SMAL: \_\_\_\_\_

Copy this sheet as needed so that each individual HAP is calculated

A	B	C	D	E	F	G	H	I	J
Coating Name	HAP is also PM (yes / no)	Individual HAP Content (max weight %)	Maximum Density of Coating (lb/gal)	Usage (gallons per month)	Overall PM Control Efficiency (%)	Individual HAP Emissions (tons per month)	Individual HAP PTE 12 Month Rolling Total from Previous Month's Attachment C in tons	Individual HAP Monthly Emission Total from Previous Year's Attachment C	Current 12-month Total of Individual HAP emissions in tons
<i>Ex. Coating with volatile HAPs</i>	<i>no</i>	<i>2.0%</i>	<i>1.587</i>	<i>1,000</i>	<i>N/A</i>	<i>0.02</i>	<i>0.00</i>	<i>0.00</i>	<i>0.02</i>
<i>Ex. Coating with solid HAP</i>	<i>yes</i>	<i>0.5%</i>	<i>1.587</i>	<i>1,000</i>	<i>96.0</i>	<i>0.0002</i>	<i>0.00</i>	<i>0.00</i>	<i>0.0002</i>

- A. Record all of the coatings that contain this individual HAP
  - B. Compare the HAP to Appendix B for verification as particulate matter.
  - C. Record the maximum weight percent of the HAP from the MSDS.
  - D. Record the maximum density of the coating from the MSDS
  - E. Record the monthly usage from the coating:  $E = D \times$  (gallons of coating used this month).
  - F. The overall PM control efficiency includes the HVLP transfer efficiency (20%), booth capture efficiency (100%), and water wall control efficiency (95%):  $20\% + (1 - 20\%) \times 100\% \times 95\% = 96\%$ . Do not apply an overall PM control efficiency if the HAP is not PM.
  - G. Calculate the particulate matter HAP emissions:  $G = C \times E \times D \times (1 - F) / 2,000$ . Otherwise calculate the volatile HAP potential to emit:  $G = C \times E \times D / 2,000$ . For HDI, calculate HDI emissions (Hexamethylene,-1,6-Diisocyanate), = 0.076 lb HDI/ lb of HDI sprayed if usage is in pounds or gallons. For HDI emissions usage in tons = 0.076 tons HDI/ton HDI sprayed (same ratio).
  - H. 12-Month Rolling Individual HAP emissions total (tons) from last month's Attachment C, in tons
  - I. Monthly Individual HAP emissions total (tons) from previous year's Attachment C, in tons
  - J. Calculate the new 12-month Rolling Individual HAP emissions totals by using  $J = G + H - I$
- Record the individual HAP SMAL from the most recent Appendix B, also available at <http://www.dnr.mo.gov/env/apcp/permits/constpmtguide.htm> as *Table of Hazardous Air Pollutants, Screening Model Action Levels and Risk Assessment Levels*.

## APPENDIX A

### Abbreviations and Acronyms

<b>%</b> .....	percent	<b>Mgal</b> .....	1,000 gallons
<b>°F</b> .....	degrees Fahrenheit	<b>MW</b> .....	megawatt
<b>acfm</b> .....	actual cubic feet per minute	<b>MHDR</b> .....	maximum hourly design rate
<b>BACT</b> .....	Best Available Control Technology	<b>MMBtu</b> ....	Million British thermal units
<b>BMPs</b> .....	Best Management Practices	<b>MMCF</b> .....	million cubic feet
<b>Btu</b> .....	British thermal unit	<b>MSDS</b> .....	Material Safety Data Sheet
<b>CAM</b> .....	Compliance Assurance Monitoring	<b>NAAQS</b> ....	National Ambient Air Quality Standards
<b>CAS</b> .....	Chemical Abstracts Service	<b>NESHAPs</b>	National Emissions Standards for Hazardous Air Pollutants
<b>CEMS</b> .....	Continuous Emission Monitor System	<b>NO<sub>x</sub></b> .....	nitrogen oxides
<b>CFR</b> .....	Code of Federal Regulations	<b>NSPS</b> .....	New Source Performance Standards
<b>CO</b> .....	carbon monoxide	<b>NSR</b> .....	New Source Review
<b>CO<sub>2</sub></b> .....	carbon dioxide	<b>PM</b> .....	particulate matter
<b>CO<sub>2</sub>e</b> .....	carbon dioxide equivalent	<b>PM<sub>2.5</sub></b> .....	particulate matter less than 2.5 microns in aerodynamic diameter
<b>COMS</b> .....	Continuous Opacity Monitoring System	<b>PM<sub>10</sub></b> .....	particulate matter less than 10 microns in aerodynamic diameter
<b>CSR</b> .....	Code of State Regulations	<b>ppm</b> .....	parts per million
<b>dscf</b> .....	dry standard cubic feet	<b>PSD</b> .....	Prevention of Significant Deterioration
<b>EIQ</b> .....	Emission Inventory Questionnaire	<b>PTE</b> .....	potential to emit
<b>EP</b> .....	Emission Point	<b>RACT</b> .....	Reasonable Available Control Technology
<b>EPA</b> .....	Environmental Protection Agency	<b>RAL</b> .....	Risk Assessment Level
<b>EU</b> .....	Emission Unit	<b>SCC</b> .....	Source Classification Code
<b>fps</b> .....	feet per second	<b>scfm</b> .....	standard cubic feet per minute
<b>ft</b> .....	feet	<b>SDS</b> .....	Safety Data Sheet
<b>GACT</b> .....	Generally Available Control Technology	<b>SIC</b> .....	Standard Industrial Classification
<b>GHG</b> .....	Greenhouse Gas	<b>SIP</b> .....	State Implementation Plan
<b>gpm</b> .....	gallons per minute	<b>SMAL</b> .....	Screening Model Action Levels
<b>gr</b> .....	grains	<b>SO<sub>x</sub></b> .....	sulfur oxides
<b>GWP</b> .....	Global Warming Potential	<b>SO<sub>2</sub></b> .....	sulfur dioxide
<b>HAP</b> .....	Hazardous Air Pollutant	<b>SSM</b> .....	Startup, Shutdown & Malfunction
<b>hr</b> .....	hour	<b>tph</b> .....	tons per hour
<b>hp</b> .....	horsepower	<b>tpy</b> .....	tons per year
<b>lb</b> .....	pound	<b>VMT</b> .....	vehicle miles traveled
<b>lbs/hr</b> .....	pounds per hour	<b>VOC</b> .....	Volatile Organic Compound
<b>MACT</b> .....	Maximum Achievable Control Technology		
<b>µg/m<sup>3</sup></b> .....	micrograms per cubic meter		
<b>m/s</b> .....	meters per second		

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

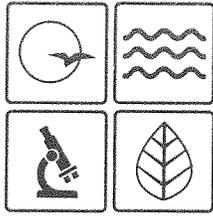
**Appendix B: Air Pollution Control Program  
Table of Hazardous Air Pollutants and Screening Model Action Levels**

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

## 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	Chemical	CAS #	SMAL tons/yr	Group ID	VOC	PM
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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



Missouri Department of

dnr.mo.gov

# NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

AUG 29 2018

Mr. Tim Baer  
Assistant General Manager Environmental  
TG Missouri Corporation  
2200 Platten Road  
Perryville, MO 63775

RE: New Source Review Permit - Project Number: 2018-06-042

Dear Mr. Baer:

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 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](http://www.oa.mo.gov/ahc).



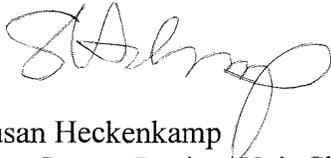
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Mr. Tim Baer  
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If you have any questions regarding this permit, please do not hesitate to contact Chad Stephenson, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 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:csj

Enclosures

c: Southeast Regional Office  
PAMS File: 2018-06-042

Permit Number: 082018-014



Base Coat Theoretical Paint	8.120	100%	810.7008	3,553	0.0000%	0.00	0.0000%	0	10.0000%	355.33	0.0000%	0	0.0000%	0	0.0010%	0.04	0.0000%	0
Clear Coat Theoretical Paint	9.060	100%	904.5504	3,965	0.0400%	1.59	0.1900%	7.53	0.0000%	0	1.0000%	3.01	0.0700%	2.78	0.0000%	0	0.0200%	0.79
Total			7,518			1.59		7.53		355.33		3.01		2.78		0.04		0.79

**PM, PM10 AND PM25 CALCULATIONS:**

**MAXIMUM POTENTIAL CALCULATIONS:**

Booth Efficiency	3 mg/m <sup>3</sup> of exhaust air
	.3380135814 lb per hour
Booth Exhaust	34,600 CFM & 31,100 CFM
2 Booths Total	65,700 Total CFM
Gun Potential	1.04 lb per min. or 62.4 lb per hour
4 Guns Total	4.16 lb per min. or 249.6 lb per hour
Booth Eff. %	95.000000%
Transfer Efficiency	20%
24/7 operation	8,766 hours max.

PM10 and PM25 Calc. are considered the same for surface coating calculations.

Formula: Max Density (lb/gal) X Max annual paint usage (gal/year) X Max % Solids X (1-TE) X (1-CE) X (1 ton / 2000 lbs)

Density (lb/gal)	Max annual Paint Usage per Booth (gal / year)	Max Paint % Solids	1-TE	1-CE	Ton	Annual Tons per Booth	2 Booths Total Tons
9.06	1,093,248	80.02%	80%	95.00%	2,000	3,012	6,023.64

PM2.5 and PM10 Max Potential Tons	6,023.64
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