PERMIT BOOK

STATE OF 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: 012012-010 Project Number: 2011-08-037

Installation Number: 157-0019

Parent Company: TG Missouri

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

Installation Name: TG Missouri

Installation Address: 2200 Plattin Road, Perryville, MO 63775

Location Information: Perry County, LG844, T35N, R10E

Application for Authority to Construct was made for:
Blackout Booth Paint System (EP-227) and an increase in plastic injection throughput. 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.

JAN 17 2012

EFFECTIVE DATE

Kyra L Moore

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

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 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 devises shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Department's Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' 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 sources(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 at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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
Perry County, LG844, T35N, R10E

1. Superseding Condition
   Special Condition 2 of this permit supersedes Special Condition 2.A. found in the previously issued construction permit 122010-014 issued by the Air Pollution Control Program.

2. Emission Limitation
   A. TG Missouri shall emit less than 10.0 tons individually and 25.0 tons combined of Hazardous Air Pollutants (HAPs) in any consecutive 12-month period from the entire installation as defined in Table 1.

   B. Attachment A and Attachment B or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 2.A.

Table 1: Installation HAP Emission Points

Emission Point	Description
EP-227	Blackout Booth Paint System
EP-226	CST Process Film Activator
EP-224	Decorative Chrome Plating
EP-223	Nickel Plating
EP-221	Hydrochloric Acid Catalyst
EP-220	Chrome Etching
EP-218	CST Process Clearcoat Spray Booth
EP-216-212	PB20 Paint System
EP-210	Decorative Chrome Plating
EP-209	Nickel Plating
EP-207	Catalyzing
EP-206	Etching
EP-168	Transfer Of Dry Raw Material
EP-167	Fluidized Bed
EP-184-187	Robotic Paint Booths (P10, P11, P12, P13)
EP-170	Boiler
EP-169	Printing

SPECIAL CONDITIONS:

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

Emission Point	Description
EP-165-166	Saturn Outerbelt Line
EP-164	Shot Blasting
EP-163	Magnesium Die Casting Furnace
EP-155-162	Air Bag Robotic Paint Booth
EP-144-148	Air Bag Robotic Paint Booth
EP-137-143	Air Bag/Column Cover Paint Booth (P-4)
EP-132-136	Mudguard Paint Booth (P-3)
EP-126-131	Back Panel (Rear Garnish) Paint Booth (P-2)
EP-116-125	Water Heaters
EP-090-115	Space Heaters
EP-085	Shot Blasting
EP-084	Aluminum Pouring/Casting
EP-083	Aluminum Die Cast Melting Furnaces (3)
EP-080-082	Building 1 Paint Booth (P-0)
EP-079	PVC Degreaser #2
EP-078	PVC Adhesive Coating
EP-077	PVC Degreaser #1
EP-075-076	PVC Steering Wheel Welding
EP-071-074	Side Molding Drying
EP-069-070	Side Molding Automatic Paint Booth
EP-066-068	Side Molding Primer Application
EP-064-065	Injection Adhesive Machine
EP-062-063	Injection Paint Booths
EP-060-061	Injection Paint Booths (B-1)
EP-001-059	Polyurethane injection and coating

3. Control Device Requirement-Filter

A. TG Missouri shall control emissions from the Blackout Booth Paint Gun using a booth and panel/mat filter media (EP-227) as specified in the permit application. Only one spray gun may be used at once.

B. TG Missouri shall control emissions from each spray applied surface coating emission unit (other than EP-227) at the installation using a control device (e.g. booth and filter) with at least 90 percent control efficiency (per manufacturer's guarantee) for particulate matter.

C. 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.

SPECIAL CONDITIONS:

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

D. 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).

E. TG Missouri 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.

F. TG Missouri 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.

4. Production Limitation

A. TG Missouri shall not inject, extrude, or mold more than 49,988 pounds of plastic per hour.

B. TG Missouri shall keep records sufficient to demonstrate compliance with Special Condition 4.A. At a minimum, records shall include plastic amounts per machine and time.

5. Use of Alternative Coating in the Blackout Booth Paint System

A. When considering using an alternative coating in the Blackout Booth Paint System that is different than a material listed in the Application for Authority to Construct, TG Missouri shall calculate the potential emissions of all individual HAP in the alternative material.

B. TG Missouri shall seek approval from the Air Pollution Control Program before use of the alternative material if the potential individual HAP emissions for the alternative material are equal to or greater than the screening model action level (SMAL) for any chemical listed in Appendix A.

C. Attachment C or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to show compliance with Special Condition 5.A.

SPECIAL CONDITIONS:

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

6. Operational Requirement
TG Missouri shall keep the surface coatings, solvents, and cleaning solutions in sealed containers whenever the materials are not in use. TG Missouri shall provide and maintain suitable, easily read, permanent markings on all of the above containers used with this equipment.

7. Record Keeping and Reporting Requirements
   A. TG Missouri 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 Material Safety Data Sheets (MSDS) for all materials used.

   B. TG Missouri shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten 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: 2011-08-037
Installation ID Number: 157-0019
Permit Number:

TG Missouri
2200 Plattin Road
Perryville, MO 63775

Complete: August 11, 2011

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

Perry County, LG844, T35N, R10E

REVIEW SUMMARY

- TG Missouri has applied for authority to construct a Blackout Booth Paint System (EP-227) and an increase in plastic injection throughput.

- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs from the Blackout Booth Paint are mixed isomer xylenes (Chemical Abstracts Service (CAS) 1330-20-7), Ortho- xylenes (CAS 95-47-6), ethyl benzene (CAS 100-41-4), and hexamethylene diisocyanate (CAS 822-06-0). HAPs from the increase in plastic injection are formaldehyde (CAS 50-00-0), acrolein (CAS 107-02-8), acetaldehyde (CAS 75-07-0), acrylic acid (CAS 79-10-7), and propionaldehyde (CAS 123-38-6).

- None of the New Source Performance Standards (NSPS) apply to the installation.

- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation. None of the currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment. 40 CFR Part 63, Subpart PPPP *National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products*, does not apply because the installation is not a major source of HAPs. 40 CFR Part 63, Subpart HHHHHH *National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources*, does not apply as the installation is not engaged in refinishing operations that encompass motor vehicle and mobile equipment. 40 CFR Part 63, Subpart XXXXXX *National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories*, does not apply as the installation has documented rationale that it does not meet any of the nine source categories.

- Single-stage filtration media is 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 Blackout Booth Paint.

- 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 below de minimis levels and SMALs. Potential emissions of volatile organic compounds (VOC) exceed the insignificant emission exemption level in 10 CSR 10-6.061(3)(A)3.A.

- This installation is located in Perry County, an attainment 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 and SMALs.

- Emissions testing is not required for the equipment.

- An application to amend the Part 70 Operating Permit is required for this installation within 1 year of equipment startup.

- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

TG Missouri (herein TG) manufactures plastic, rubber, and metal automobile parts and accessories including steering wheels, airbags and interior panels. TG Missouri 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 from the Air Pollution Control Program.

Table 2: 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
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

PROJECT DESCRIPTION

TG proposes to install an automated paint system designated as Blackout Booth Paint System (EP-227) which will result in an increase in plastic injection from equipment in permit 0595-007. The Blackout Booth Paint System will be used to coat plastic automobile parts with solvent based coatings. Parts are loaded onto a conveyor by operators in the prep-room. The conveyor then takes the parts into the spray booth where they are coated by a robotic spray gun. Painted parts then travel through an existing unheated flash-off zone, natural gas direct heated drying oven (EP-215), and finally a cooling zone before being manually unloaded by operators. The coating consists of a single application of a paint, hardener, and thinner mixture. The paint is NB Coatings Recipe # 44615.001, 96218 Mono 2 KB, Black. The hardener is NB Coatings Recipe # AS178.001, 2003-C 2 KB, Catalyst. The thinner is Manor Chemical Product Number T-66476, Product Name ST-718. The volume of thinner to paint is 20 percent. The volume of paint, hardener, and thinner to the total mixture is 62.51, 24.97, and 12.53 percent, respectively. The maximum hourly design rate of spraying of the mixture is 100 grams per minute. The weighted average mixture density is 8.27 pounds per gallon. Coating is applied using an Iwata LPA 200 high volume low pressure (HVLP) gun. Coating was assigned 65 percent solids transfer efficiency. Overspray solids are controlled by Global Finishing Solutions Wave Filter Media. All surface coating emissions are considered to be emitted from the booth itself.

Polypropylene plastic injection from emission units permitted in 0595-007 will increase by 180 pounds per hour due to this project. Emissions from plastic injection are uncontrolled.

The drying oven is rated at 0.75 million British thermal units per hour heat input and was installed as part of PB20 under permit 022009-011. That permit did not account for emissions from natural gas combustion. The emissions are included in this review.

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. The balance of total coating and volatiles was used to determine the percent solids. Conservatively, all solids were considered to be $PM_{2.5}$. Solids are captured by the booth at TG confirmed 100 percent efficiency and controlled by the filter media at 92 percent. The control efficiency is cited from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Table B.2-3, AIRS code 058 for a mat or panel filter.

Emissions from the increase in plastic injection were calculated using emission factors published in the Journal of the Air & Waste Management Association, Volume 49, January 1999, pages 49-56, *Development of Emission Factors for Polypropylene Processing*. These emission factors were not available when the injection equipment at TG was originally permitted. Existing permits only evaluated VOC emissions. However, the affected equipment in this review was evaluated for PM, VOC, and HAPs. A special condition has been included to reinforce the maximum plastic injection, extrusion, and molding rate of 49,988 pounds per hour. This rate cannot be determined through previous permits and was supplied by TG.

TG has received several permits for paint booths. Most of these permits did not evaluate PM emissions, nor require overspray control devices. PM emissions from paint booths are likely, and control devices are not inherent to the process. For emissions reductions from non-inherent control devices to be considered for potential to emit purposes, the control devices must be required through federally enforceable conditions. Therefore, control devices for the existing paint booths are required as part of this review. Potential emissions from these units were not re-evaluated in this review.

Combustion emissions from the drying oven were calculated using emission factors in AP-42, Section 1.4, *Natural Gas Combustion*, July 1998, Source Classification Code (SCC) 1-02-006-03.

Existing potential emissions were calculated as the sum of each permit's potential emissions including permit 0986-012A through 122010-014. Potential emissions of the application represent the potential of the new equipment and increase in plastic injection, assuming continuous operation (8,760 hours per year). The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory *De Minimis* Levels	Existing Potential Emissions	Existing Actual Emissions (2010 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	0.70	N/D	1.12	N/A
PM_{10}	15.0	23.39	3.01	1.12	N/A
$PM_{2.5}$	10.0	N/D	0.27	1.12	N/A
SOx	40.0	0.14	0.05	1.93E-03	N/A
NOx	40.0	19.11	5.72	0.32	N/A
VOC	40.0	521.86	183.91	28.61	N/A
CO	100.0	7.36	0.88	0.27	N/A

Combined HAPs	25.0	< 25.0	N/D	0.15	< 25.0
Xylene (ortho-)	10.0	N/D	N/D	1.61E-02	< 10.0
Xylene (mixed isomers)	10.0	< 10.0	N/D	5.30E-02	< 10.0
Ethylbenzene	10.0	< 10.0	N/D	2.16E-02	< 10.0
Dibutyl Phthalate	10.0	< 10.0	N/D	N/A	< 10.0
Toluene	10.0	< 10.0	N/D	N/A	< 10.0
Naphthalene	10.0	< 10.0	N/D	N/A	< 10.0
[2] MIBK	10.0	< 10.0	N/D	N/A	< 10.0
Isophorone	10.0	< 10.0	N/D	N/A	< 10.0
Hydrogen Chloride	10.0	< 10.0	N/D	N/A	< 10.0
Glycol Ethers	[1] 5	< 10.0	N/D	N/A	< 10.0
Butoxyethanol Acetate	[1] 5	< 10.0	N/D	N/A	< 10.0
[3] HDI	[1] 0.02	< 10.0	N/D	1.87E-02	< 10.0
Chromium Compounds	[1] 5	< 10.0	N/D	N/A	< 10.0
Nickel Compounds	[1] 1	< 10.0	N/D	N/A	< 10.0
Formaldehyde	[1] 2	N/D	N/D	1.51E-02	< 10.0
Acrolein	[1] 0.04	N/D	N/D	6.39E-04	< 10.0
Acetaldehyde	[1] 9	N/D	N/D	1.25E-02	< 10.0
Acrylic Acid	[1] 0.6	N/D	N/D	6.31E-05	< 10.0
Propionaldehyde	[1] 5	N/D	N/D	2.61E-03	< 10.0

N/A = Not Applicable; N/D = Not Determined
[1] Screening Model Action Level (SMAL)
[2] Methyl Isobutyl Ketone (MIBK)
[3] Hexamethylene Diisocyanate (HDI)

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 below de minimis levels and SMALs. Potential emissions of VOC exceed the insignificant emission exemption level in 10 CSR 10-6.061(3)(A)3.A.

APPLICABLE REQUIREMENTS

TG Missouri 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

- *Submission of Emission Data, Emission Fees and Process Information,* 10 CSR 10-6.110

- *Operating Permits*, 10 CSR 10-6.065

- *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*, I recommend this permit be granted with special conditions.

_____ _____

David Little Date
Environmental Engineer

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated August 5, 2011, received August 11, 2011, designating TG Missouri as the owner and operator of the installation.

- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

- Southeast Regional Office Site Survey, dated August 24, 2011.

Attachment A – Combined HAPs Compliance Worksheet

TG Missouri
Perry County, LG844, T35N, R10E
Project Number: 2011-08-037
Installation ID Number: 157-0019
Permit Number: _____

This sheet covers the period from _____ to _____. (Copy this sheet as needed.)
(month, year) (month, year)

Column 1	Column 2 (a)	Column 3	Column 4	Column 5
Material Used, (Name, HAP CAS #)	Amount of Material Used (Include Units)	Density (lbs/gal)	HAP Content (Weight %)	HAP Emissions (Tons)

(b) Chromium Emissions from EP-206, EP-210, EP 220, and EP-224	
Nickel Emissions from Attachment D (permits 022009-011, 022010-014) in Tons	
(c) Total HAP Emissions Calculated for this Month in Tons	
(d) 12-Month HAP Emissions Total from Previous Month's Worksheet in Tons	
(e) Monthly HAP Emissions Total (c) from Previous Year's Worksheet in Tons	
(f) Current 12-month Total of HAP Emissions in Tons: [(c) + (d) - (e)]	

(a) 1) If usage is in tons - [Column 2] x [Column 4] = [Column 5];
2) If usage is in pounds - [Column 2] x [Column 4] x [0.0005] = [Column 5];
3) If usage is in gallons - [Column 2] x [Column 3] x [Column 4] x [0.0005] = [Column 5];

(b) Calculate the monthly chromium emissions (tons) using the appropriate emission factor from AP-42, Section 12.20 *Electroplating*. Also record this month's nickel compound emissions from Attachment D from permits 022009-011 and 122010-014.

(c) Summation of [Column 5] in Tons;

(d) 12-Month HAP emissions (f) from last month's Attachment A in Tons;

(e) Monthly HAP emissions total (c) from the previous year's Attachment A in Tons;

(f) Calculate the new 12-month combined HAPs emissions total. A 12-Month HAP emissions total (f) of less than 25 tons indicates compliance.

Attachment B – Individual HAP Compliance Worksheet

TG Missouri
Perry County, LG844, T35N, R10E
Project Number: 2011-08-037
Installation ID Number:
Permit Number: _____

HAP Name: _____ CAS No.:_____

This sheet covers the month of _____ in the year _____. (Copy this sheet as needed.)

Column 1 (a)	Column 2 (b)
List materials that contain this HAP (Name, Type)	HAP emissions from Attachment A [Column 5] (in Tons)

(c) Total Individual HAP Emissions for this Month, Tons	
(d) 12-Month Individual HAP Emissions Total (f) from Previous Month's Attachment B, Tons	
(e) Monthly Individual HAP Emissions Total (c) from Previous 12 Month's Attachment B, Tons	
(f) Current 12-month Total of HAP Emissions in Tons: [(c) + (d) - (e)]	

(a) Individually list each material which emits this specific HAP identified from Appendix A.
(b) Record the Individual HAP emissions already calculated for Attachment A in [Column 5] in Tons;
(c) Summation of [Column 5] in Tons;
(d) Record the previous 12-Month individual HAP emission total (f) from last month's Attachment B, in Tons;
(e) Record the monthly HAP emission total (c) from previous 12-Month Attachment B, in Tons:
(f) Calculate the new 12-month individual HAP emissions total. A 12-Month individual HAP emissions total of less than 10.0 tons indicates compliance.

Attachment C – Blackout Booth Paint System Alternative Coating Potential to Emit Compliance Worksheet

TG Missouri
Perry County, LG844, T35N, R10E
Project Number: 2011-08-037
Installation ID Number:
Permit Number: _____

This sheet covers the month of _____. (Copy this sheet as needed.)
(month, year)

[1]Material Name	[2]Individual HAP Name and CAS No.	[2]HAP is also Particulate Matter (yes / no)	[2]Individual HAP Content (weight %)	[2]Product Weight (pounds per gallon)	[3]Maximum Hourly Design Rate (gallons per hour)	[4]Individual HAP PTE (tons per year)	[5]Individual HAP SMAL (tons per year)
(example) new coating	*Benzene 71-43-2*	*no*	*20.0*	*10.0*	*1.32*	*11.56*	*2.0*
(example) new coating	*Cobalt 2-Ethylhexanoate 136-52-7*	*yes*	*0.2*	*10.0*	*1.32*	*0.003*	*0.1*

[1] Record the names of all alternative coatings planned to be used (include reducer / thinner / hardener / paint / etc).
[2] This information is reported on the respective coating's MSDS. Compare each ingredient on the MSDS against the chemical names listed in Appendix A for verification as a HAP.
[3] The Maximum Hourly Design Rate (MHDR) of the Iwata LPA 200 HVLP gun at this booth is limited to 100 grams of mixture per minute. Determine the gallons per hour of each coating component by using the density of each component in the mixture and the mixing ratio.
[4] Individual HAP PTE calculated by multiplying the Individual HAP Content, Product Weight, MHDR, and 4.38. Divide the result by 100. If the HAP is also particulate matter (see Appendix A) then multiply the Individual HAP Content, Product Weight, MHDR, and 4.38; to account for transfer and control efficiency multiply the result by 0.00028.
[5] Individual HAP SMAL as reported in Appendix A. If the Individual HAP PTE is equal to or greater than the Individual HAP SMAL, seek approval from the Air Pollution Control Program before using this coating.

Appendix A - Table of Hazardous Air Pollutants and Screening Model Action Levels (June 3, 2011 Revision 7)

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		0.00002	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
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

Appendix A - Table of Hazardous Air Pollutants and Screening Model Action Levels (June 3, 2011 Revision 7)

Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM
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
XYLENE, [ORTHO-]	95-47-6	10	G	Y	N
XYLENE, [PARA-]	106-42-3	10	G	Y	N
XYLENES (MIXED ISOMERS)	1330-20-7	10	G	Y	N

Legend

Group ID	Aggregate Group Name
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

Note 1 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

Ms. Maggie Nihira
Environmental Specialist
TG Missouri
2200 Plattin Road
Perryville, MO 63775

RE: New Source Review Permit - Project Number: 2011-08-037

Dear Ms. Nihira:

Enclosed with this letter is your permit to construct. Please study it carefully. 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 with 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.

If you have any questions regarding this permit, please do not hesitate to contact David Little, at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:dlk

Enclosures

c: Southeast Regional Office
PAMS File: 2011-08-037

Permit Number: