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: 082014-009

Project Number: 2014-05-077
Installation Number:510-1642

Parent Company: Alberici Constructors, Inc.

Parent Company Address: 2150 Keinlen Avenue, St. Louis, MO 63121-5505

Installation Name: Alberici Constructors, Inc.

Installation Address: 2150 Keinlen Avenue, St. Louis, MO 63121-5505

Location Information: St. Louis City, Land Grant 02976

Application for Authority to Construct was made for:
a sand blast structure which will also be used for coating large metal parts. 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.

AUG 15 2014

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 devices 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."

Alberici Constructors, Inc.
St. Louis City, Land Grant 02976

1. Coating and Coating Component Usage Limitations

   A. Alberici Constructors, Inc. shall use less than 250 gallons of coatings, coating components, thinner, and reducer in any consecutive 12-month period in sand blast shop EP-30.

   B. Alberici Constructors, Inc. may use coatings and coating components from the following table in sand blast shop EP-30.

Table 1: Allowable Coatings and Coating Components

Manufacturer	Description	Product ID
Any	Acetone	N/A
Any	Butyl acetate or any reducer, such as COROTECH (formerly CORONADO) Urethane Reducer, which contains at least 99.5% butyl acetate	N/A
CORONADO	CORONADO (COROGUARD™) Superthane™ Aliphatic Urethane - any color	827 Line
COROTECH	Coal Tar Epoxy Black	V157 Line
DuPont	Enamel Reducer	#3812S
PPG	PITT-GUARD™ Rapid-Coat Direct-to-Rust Epoxy Mastic Coatings - any color	95-245 Series
PPG	Ultra Black Ready Mix	95-814
PPG	PITTHANE™ Ultra- Gloss Urethane Enamels - any color	95-812 Series
SEM Products Inc.	Pro-Tex Truckbed Liner - Black	10359ZP/ 40671/40674/40678
Richards Paint Co.	Interior/Exterior Poly High-Gloss Enamel - Yellow	1009-N
Richards Paint Co.	Interior/Exterior Poly High-Gloss Enamel - Safety Red	1013-N
Sunnyside Corp.	Lacquer Thinner	457

SPECIAL CONDITIONS:

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

C. Attachment A or an equivalent form, such as an electronic form, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 1.A and 1.B.

2. Use of Alternative Coating or Coating Component

A. Alberici Constructors, Inc. may use any alternative coating, thinner, or reducer which meets the following three criteria:

1) Its VOC content is not greater than 2.8 pounds per gallon;
2) Its potential emissions of each individual HAP are not greater than the screening model action level (SMAL) for that HAP listed in Appendix B or in the most recent HAP SMAL table located at *http://dnr.mo.gov/env/apcp/docs/cp-hapsmaltbl6.pdf*; and
3) Its potential emissions of all HAPs combined are not greater than 25.0 tons/year.

For multi-component coatings, each component must meet the above three criteria.

B. Alberici Constructors, Inc. shall seek approval from the Air Pollution Control Program before use of an alternative coating, coating component, thinner, or reducer in the following three cases:

1) Its VOC content exceeds 2.8 pounds per gallon;
2) Its potential emissions of any individual HAP exceed the respective screening model action level (SMAL) for that HAP listed in Appendix B or in the most recent HAP SMAL table located at *http://dnr.mo.gov/env/apcp/docs/cp-hapsmaltbl6.pdf*; or
3) Its potential emissions of all HAPs combined exceed 25.0 tons per year.

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

D. Alberici Constructors, Inc. shall maintain a copy of the completed Attachment B on site for each alternative coating, coating component, reducer, and thinner used. Alberici Constructors, Inc. shall also maintain a copy of the MSDS on site for each alternative coating, coating component, reducer, and thinner used.

SPECIAL CONDITIONS:

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

3. Equipment Limitations

A. Alberici Constructors, Inc. shall operate the single Schmidt Mfg. Inc. portable pressure blaster in the sand blast shop EP-30.

B. Alberici Constructors, Inc. shall use a blasting nozzle no larger than 7/16 inch (#7) on the portable pressure blaster specified in Special Condition 3.A when it is used in sand blast shop EP-30.

C. Alberici Constructors, Inc. shall maintain a copy of the manufacturer's performance warranty on site for the portable pressure blaster specified in Special Condition 3.A.

D. Alberici Constructors, Inc. shall operate the single Graco Inc. AA Series Model G15 Spray Gun in the sand blast shop EP-30.

E. Alberici Constructors, Inc. shall use a spray tip with an orifice no larger than 0.17 inch (0.432 mm) on the spray gun specified in Special Condition 3.D when it is used in sand blast shop EP-30.

F. Alberici Constructors, Inc. shall maintain a copy of the manufacturer's performance warranty on site for the equipment specified in Special Conditions 3.D.

G. Alberici Constructors, Inc. may not use any other equipment which emits any air contaminant in sand blast shop EP-30.

4. Control Device Requirement – Fan With Replaceable Filter Fabric

A. Alberici Constructors, Inc. shall control emissions from sand blast shop EP-30 using a fan with replaceable filter fabric as specified in the permit application.

B. The fan with replaceable filter fabric shall be operated and maintained in accordance with the manufacturer's specifications.

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

D. Alberici Constructors, Inc. shall maintain a copy of the manufacturer's performance warranty for the fan with filter fabric on site.

SPECIAL CONDITIONS:

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

E. Alberici Constructors, Inc. shall maintain an operating and maintenance log for the fan with filter fabric 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.

5. Operational Requirement - Solvent Cloths
   Alberici Constructors, Inc. shall keep the solvents and cleaning solutions in sealed containers whenever the materials are not in use. Alberici Constructors, Inc. shall provide and maintain suitable, easily read, permanent markings on all solvent and cleaning solution containers used with this equipment.

6. Record Keeping and Reporting Requirements
   A. Alberici Constructors, Inc. 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 MSDS for all materials used

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

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW
Project Number: 2014-05-077
Installation ID Number: 510-1642
Permit Number:

Alberici Constructors, Inc.
2150 Keinlen Avenue
St. Louis, MO 63121-5505

Complete: June 26, 2014

Parent Company:
Alberici Constructors, Inc.
2150 Keinlen Avenue
St. Louis, MO 63121-5505

St. Louis City, Land Grant 02976

REVIEW SUMMARY

- Alberici Constructors, Inc. has applied for authority to construct a sand blast structure. The structure, to be known as sand blast shop EP-30, will be used both for sand blasting and for coating parts which are too large to fit in the existing paint booths.

- HAP emissions are expected from the proposed equipment. HAPs emitted from this process are ethylbenzene (CAS 100-41-4), hexamethylene,-1,6-diisocyanate (CAS 822-06-0), methyl methylacrylate (CAS 80-62-6), toluene (CAS 108-88-3), and xylene mixed isomers (1330-20-7). Other HAPs may be emitted if alternative coatings are used.

- None of the NSPS apply to this equipment.

- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment. MACT T does not apply because halogenated cleaning solvents are not used. MACTs HHHHHH and XXXXXX do not apply because none of the target HAPs are emitted. The installation will not be subject to MACT MMMM because it is taking a voluntary limit of less than 250 gallons of coating per year.

- A fan with replaceable filter fabric is being used to control the particulate 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 of all pollutants are conditioned below de minimis levels.

- This installation is located in St. Louis City, a nonattainment area for the 8-hour ozone standard and the PM-2.5 standard and an attainment area for all other criteria pollutants. Part of Jefferson County is a nonattainment area for lead. This installation is not located in the Jefferson County lead nonattainment area.

- 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.

- An application to modify this installation's Intermediate Operating Permit is required within 90 days of commencement of operations.

- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Alberici Constructors, Inc. (dba Hillsdale Fabricators) is a manufacturer located in St. Louis City which fabricates structural steel for power plants, bridges, airports, stadiums, arenas, casinos and other types of structures. The installation has the potential to be a major source of VOCs and HAPs, but has accepted voluntary, federally enforceable limitations in their Intermediate Operating Permit which limit VOC emissions to less than major source levels.

No New Source Review permits have been issued to Alberici Constructors, Inc. from the Air Pollution Control Program. The installation's Intermediate Operating Permit, OP2012-006A, does not expire until February 6, 2017.

St. Louis City issued NOV #3277 to the installation on December 3, 2010. No other NOEE/NOVs have been issued to the installation in the last five years.

PROJECT DESCRIPTION

- Alberici Constructors, Inc. has applied for authority to construct a sand blast structure. The enclosed structure, to be known as sand blast shop EP-30, will be used both for sand blasting and for coating parts which are too large to fit in the existing paint booths. Particulate emissions will be controlled by a fabric filter.

- Steel and metal parts will be sand blasted clean in the enclosed structure, using a single Schmidt Mfg. Inc. portable pressure blaster. The blasting nozzle will be no larger than 7/16 inch (#7). According to the manufacturer's specifications, this tip limits the blaster's MHDR to a maximum of 2,350 pounds of blasting sand per hour. The applicant intends to operate the blaster at a lower psi and use no more than 1,600 pounds of sand per hour, but this does not affect PTE.

- Parts which are too large to fit in the existing paint booths will be coated in sand blast shop EP-30, using a single Graco Inc. Model G15 AA Series Spray Gun. The spray tip will have an orifice no larger than 0.17 inch (0.432 mm). According to the manufacturer's specifications, this tip limits the spray gun's MHDR to a maximum of 13.5 gallons of coating per hour (0.85 liters of coating per minute). The applicant intends to operate the spray gun at a lower psi and use no more than 11.1 gallons of coating per hour (0.7 liters of coating per minute), but this does not affect the PTE.

EMISSIONS/CONTROLS EVALUATION

The two sources of emissions from this project are the portable pressure blaster and the spray gun.

The portable pressure blaster emits only particulates. An MHDR of 2,350 lb/hr and an emission factor of 0.69 pound of PM per 1,000 pounds of sand blasted were used in this analysis. The emission factor was obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Table 13.2.6-1 (October 1997). This factor is for abrasive blasting of unspecified metal parts, controlled with a fabric filter. Multiplying MHDR by the emission factor gives the PM PTE for this source. To be conservative, PM_{10} and $PM_{2.5}$ were assumed equal to PM. Note that the emission factor accounts for a fabric filter, so no further control efficiency can be applied.

The spray gun emits particulates, VOC, and HAP. To be conservative, PM, PM_{10} and $PM_{2.5}$ contents were all assumed equal to solids content. An MHDR of 13.5 gallons of coating per hour was used in this analysis. All VOC and HAP contained in the coatings was assumed to be emitted to the atmosphere, but a transfer efficiency of 50% was used for the solids. This transfer efficiency is based on the statement "Transfer efficiency for typical air atomized spraying ranges from 30 to 50 percent." found in AP-42 Section 4.2.2.8 (August 1982). Since the newer air assisted spray guns have higher efficiencies than the older air atomized spray guns, the higher end of the percent range was used. The fabric filter controls only particulates, not VOC or HAP, so no control efficiency was applied.

Density, VOC weight % content, HAP weight % content, and solids weight % content were obtained from the MSDS for each coating. Thinners and reducers were treated the same as coatings. Where the MSDS specified a range of values, the highest value was used. Where the MSDS specified multiple HAPs, the individual HAP contents were totaled, using the highest value for each one where ranges were specified. For two-component coatings, the density, VOC content, and solids content for the mixture were used, and the HAP content from the component with the most HAP was used. After calculating solids, VOC, and HAP emissions for each coating, the largest figure in each category was used for PTE. A calculation was also done for a theoretical alternative coating with a VOC content of 2.8 pounds per gallon, the maximum allowed by 10 CSR 10-5.330(3)(J)2.B.

The only HAPs in the allowed coatings are ethylbenzene (CAS 100-41-4), hexamethylene,-1,6-diisocyanate (CAS 822-06-0), methyl methylacrylate (CAS 80-62-6), toluene (CAS 108-88-3), and xylene mixed isomers (1330-20-7). Hexamethylene,-1,6-diisocyanate has a SMAL of 0.02 tpy. All the others have SMALs of 10.0 tpy. Therefore hexamethylene,-1,6-diisocyanate was calculated separately, but the other HAPs were not. Note: other HAPs may be emitted if alternative coatings are used, but this permit restricts their emissions below their respective SMALs.

Maximum emissions are over de minimis levels. The applicant suggested taking a voluntary limitation of 183 gallons of coating per year, which is 25% of their current usage. However a limit of less than 250 gallons per year gives the installation a little room for growth while still ensuring that emissions are de minimis and MACT MMMM does not apply. Conditioned potential emissions were calculated using 250 gallons of coatings per year instead of 118,260 gallons per year (MHDR of 13.5 gallons per hour times 8760 hours per year).

The following table provides an emissions summary for this project. Since this the first NSR permit for this installation, there are no existing potential emissions. Existing actual emissions were taken from the installation's 2013 EIQ. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). Conditioned potential emissions account for a voluntary limitation on throughput of 250 gallons of coating per year or less to

avoid being subject to 40 CFR 63 Subpart MMMM, *National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products*.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory *De Minimis* Level/SMAL	Existing Actual Emissions (2013 EIQ)	Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	N/D	291.4	7.7
PM_{10}	15.0	1.1	291.4	7.7
$PM_{2.5}$	10.0	1.0	291.4	7.7
SOx	40.0	0.0	N/A	N/A
NOx	40.0	0.1	N/A	N/A
VOC	40.0	3.6	435.2	0.9
CO	100.0	0.0	N/A	N/A
GHG (CO_2e)	100,000	N/D	N/A	N/A
GHG (mass)	250.0	N/D	N/A	N/A
Hexamethylene,-1,6-diisocyanate	10.0/0.02	N/D	3.43	0.01
Largest individual HAP	10.0	0.0	227.7	0.5
Total HAPs	25.0	0.0	227.7	0.5

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.

APPLICABLE REQUIREMENTS

Alberici Constructors, Inc. 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. St. Louis City ordinances may also apply.

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

SPECIFIC REQUIREMENTS

- *Control of Emissions From Solvent Metal Cleaning*, 10 CSR 10-5.300
- *Control of Emissions From Industrial Surface Coating Operations*, 10 CSR 10-5.330
- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400

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.

_____ _____

Cheryl Steffan Date
New Source Review Unit

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 20, 2014, received May 23, 2014, designating Alberici Constructors, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Attachment A – Coating Usage Tracking Sheet

Alberici Constructors, Inc. Installation ID Number: 510-1642 St. Louis City, Land Grant 02976
Project Number: 2014-05-077 Permit Number:

This sheet covers the period from _____ to _____.
(month, year) (month, year)

(a) Month	(b) Coating Name	(c) Gallons Used
Example	*Butyl acetate*	*1.7*

(d) Monthly usage total	
(e) 12-month usage total (g) from Attachment A for last month	
(f) Monthly usage total (d) from Attachment A for this month last year	
(g) Current 12-month usage total = (d) + (e) - (f)	

(a) Fill in month.
(b) Fill in Coating Name. Completed Alternative Coating or Coating Component Compliance Sheets must be available for any coatings, coating components, thinners, or reducers not on the following list.

1. Acetone
2. Butyl acetate (use for any reducer, such as COROTECH (formerly CORONADO Urethane Reducer, which Contains at least 99.5% butyl acetate
3. CORONADO (COROGUARD™) Superthane™ Aliphatic Urethane, 827 Line – any color
4. COROTECH Coal Tar Epoxy Black, V157 Line
5. DuPont Enamel Reducer, #3812S
6. PPG PITT-GUARD™ Rapid-Coat Direct-to-Rust Epoxy Mastic Coatings, 95-245 Series – any color
7. PPG Ultra Black Ready Mix, 95-814
8. PPG PITTHANE™ Ultra-Gloss Urethane Enamel, 95-812 Series – any color
9. SEM Products Inc. Pro-Tex Truckbed Liner – Black, 10359ZP/40671/40674/40678
10. Richards Paint Co. Interior/Exterior Poly High-Gloss Enamel – Yellow, 1009-N
11. Richards Paint Co. Interior/Exterior Poly High-Gloss Enamel – Safety Red, 1013-N
12. Sunnyside Corp. Lacquer Thinner, 457

(c) Fill in gallons of this coating used this month.
(d) Sum gallons for all coatings used this month. (Don't include example gallons in sum.)
(e) Record the 12-month usage total (g) from Attachment A for last month.
(f) Record the monthly usage total (d) from Attachment A for this month last year.
(g) Add the monthly usage total from this month to the 12-month usage total from last month. Then subtract the monthly usage total from a year ago. A total of less than 250 gallons of coatings is necessary for compliance.

Attachment B – Alternative Coating or Coating Component Compliance Sheet

Alberici Constructors, Inc. Installation ID Number: 510-1642 St. Louis City, Land Grant 02976
Project Number: 2014-05-077 Permit Number:

Coating Name:_____ Date: _____ Copy this sheet as needed.

To fill in this compliance sheet, you will need the following information. Maximum usage is always 250 gal/yr. The remaining information can be obtained from the manufacturer, usually on a Material Safety Data Sheet or other informational sheet such as a Regulatory Constant Report.

_____250_____ Maximum usage in gal/yr

_____ Density in lb/gal (Note: Sometimes relative density or specific gravity is given instead of density. If it is, multiply by 8.345 lb/gal to get density.)

A list of all the HAPs contained in the coating or coating component, with the weight percent for each. Put this information in the table below. If a weight percent is given as a range, use the high end of the range. If the MSDS lists all ingredients, identify the HAPs by checking the table in Appendix B or the *Table of Hazardous Air Pollutants, Screening Model Action Levels* available at http://dnr.mo.gov/env/apcp/docs/cp-hapsmaltbl6.pdf.

A	B	C	D	E
Individual HAP Name and CAS #	Individual HAP Weight %	Calculation for Individual HAP PTE = Density X Individual HAP Weight % / 100 X 250 / 2000 =	Individual HAP PTE (tons/yr)	Screening Model Action Level (SMAL)
Example HAP 123-45-6	0.5	11.6 X 0.5 / 100 X 250 / 2000 =	0.00725	
		Total HAP PTE (tons/yr)		

A. Record each individual HAP from this coating or coating component on a separate line.
B. Record the weight percent for each individual HAP.
C. Calculate the PTE for each individual HAP.
D. Record the results of the calculations.
E. Copy the SMAL for each individual HAP from Appendix B or from the *Table of Hazardous Air Pollutants, Screening Model Action Levels*, which is available at http://dnr.mo.gov/env/apcp/docs/cp-hapsmaltbl6.pdf. **If any individual HAP's PTE is greater than its SMAL, seek approval from the Air Pollution Control Program New Source Review Unit before using.**
F. Sum individual HAP PTEs to get Total HAP PTE. (Do not include example HAP in total.)
G. If Total HAP PTE exceeds 25.0 tons/yr, seek approval from the Air Pollution Control Program New Source Review Unit before using.

APPENDIX A

Abbreviations and Acronyms

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

Appendix B: Table of Hazardous Air Pollutants and Screening Model Action Levels (May 3, 2012 Revision 10)

Chemical	CAS #	SMAL (tons/yr)	Group ID	VOC	PM	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	CARBARYL	63-25-2	10	V	Y	Y	DICHLOROPROPANE, [1,2-]	78-87-5	1		Y	N
ACETAMIDE	60-35-5	1		Y	N	CARBON DISULFIDE	75-15-0	1		Y	N	DICHLOROPROPENE, [1,3-]	542-75-6	1		Y	N
ACETONITRILE	75-05-8	4		Y	N	CARBON TETRACHLORIDE	56-23-5	1		Y	N	DICHLORVOS	62-73-7	0.2		Y	N
ACETOPHENONE	98-86-2	1		Y	N	CARBONYL SULFIDE	463-58-1	5		Y	N	DIETHANOLAMINE	111-42-2	5		Y	N
ACETYLAMINOFLUORINE, [2-]	53-96-3	0.005	V	Y	Y	CATECHOL	120-80-9	5		Y	N	DIETHYL SULFATE	64-67-5	1		Y	N
ACROLEIN	107-02-8	0.04		Y	N	CHLORAMBEN	133-90-4	1		Y	Y	DIETHYLENE GLYCOL MONOBUTYL ETHER	112-34-5	5	P	Y	N
ACRYLAMIDE	79-06-1	0.02		Y	N	CHLORDANE	57-74-9	0.01		Y	Y	DIMETHOXYBENZIDINE, [3,3-]	119-90-4	0.1	V	Y	Y
ACRYLIC ACID	79-10-7	0.6		Y	N	CHLORINE	7782-50-5	0.1		N	N	DIMETHYL BENZIDINE, [3,3-]	119-93-7	0.008	V	Y	Y
ACRYLONITRILE	107-13-1	0.3		Y	N	CHLOROACETIC ACID	79-11-8	0.1		Y	N	DIMETHYL CARBAMOYL CHLORIDE	79-44-7	0.02		Y	N
ALLYL CHLORIDE	107-05-1	1		Y	N	CHLOROACETOPHENONE, [2-]	532-27-4	0.06		Y	N	DIMETHYL FORMAMIDE	68-12-2	1		Y	N
AMINOBIPHENYL, [4-]	92-67-1	1	V	Y	N	CHLOROBENZENE	108-90-7	10		Y	N	DIMETHYL HYDRAZINE, [1,1-]	57-14-7	0.008		Y	N
ANILINE	62-53-3	1		Y	N	CHLOROBENZILATE	510-15-6	0.4	V	Y	Y	DIMETHYL PHTHALATE	131-11-3	10		Y	N
ANISIDINE, [ORTHO-]	90-04-0	1		Y	N	CHLOROFORM	67-66-3	0.9		Y	N	DIMETHYL SULFATE	77-78-1	0.1		Y	N
ANTHRACENE	120-12-7	0.01	V	Y	N	CHLOROMETHYL METHYL ETHER	107-30-2	0.1		Y	N	DIMETHYLAMINOAZOBENZENE, [4-]	60-11-7	1		Y	N
ANTIMONY COMPOUNDS		5	H	N	Y	CHLOROPRENE	126-99-8	1		Y	N	DIMETHYLANILINE, [N-N-]	121-69-7	1		Y	N
ANTIMONY PENTAFLUORIDE	7783-70-2	0.1	H	N	Y	CHROMIUM (VI) COMPOUNDS		0.002	L	N	Y	DINITRO-O-CRESOL, [4,6-] (Note 6)	534-52-1	0.1	E	Y	Y
ANTIMONY POTASSIUM TARTRATE	28300-74-5	1	H	N	Y	CHROMIUM COMPOUNDS		5	L	N	Y	DINITROPHENOL, [2,4-]	51-28-5	1		Y	N
ANTIMONY TRIOXIDE	1309-64-4	1	H	N	Y	CHRYSENE	218-01-9	0.01	V	Y	N	DINITROTOLUENE, [2,4-]	121-14-2	0.02		Y	N
ANTIMONY TRISULFIDE	1345-04-6	0.1	H	N	Y	COBALT COMPOUNDS		0.1	M	N	Y	DIOXANE, [1,4-]	123-91-1	6		Y	N
ARSENIC COMPOUNDS		0.005	I	N	Y	COKE OVEN EMMISIONS	8007-45-2	0.03	N	Y	N	DIPHENYLHYDRAZINE, [1,2-]	122-66-7	0.09	V	Y	Y
ASBESTOS	1332-21-4	0	A	N	Y	CRESOL, [META-]	108-39-4	1	B	Y	N	DIPHENYLMETHANE DIISOCYANATE, [4,4-]	101-68-8	0.1	V	Y	N
BENZ(A)ANTHRACENE	56-55-3	0.01	V	Y	N	CRESOL, [ORTHO-]	95-48-7	1	B	Y	N	EPICHLOROHYDRIN	106-89-8	2		Y	N
BENZENE	71-43-2	2		Y	N	CRESOL, [PARA-]	106-44-5	1	B	Y	N	ETHOXYETHANOL, [2-]	110-80-5	10	P	Y	N
BENZIDINE	92-87-5	0.0003	V	Y	N	CRESOLS (MIXED ISOMERS)	1319-77-3	1	B	Y	N	ETHOXYETHYL ACETATE, [2-]	111-15-9	5	P	Y	N
BENZO(A)PYRENE	50-32-8	0.01	V	Y	N	CUMENE	98-82-8	10		Y	N	ETHYL ACRYLATE	140-88-5	1		Y	N
BENZO(B)FLUORANTHENE	205-99-2	0.01	V	Y	N	CYANIDE COMPOUNDS		0.1	O	Y	N	ETHYL BENZENE	100-41-4	10		Y	N
BENZO(K)FLUORANTHENE	207-08-9	0.01	V	Y	N	DDE	72-55-9	0.01	V	Y	Y	ETHYL CHLORIDE	75-00-3	10		Y	N
BENZOTRICHLORIDE	98-07-7	0.006		Y	N	DI(2-ETHYLHEXYL) PHTHALATE, (DEHP)	117-81-7	5		Y	N	ETHYLENE GLYCOL	107-21-1	10		Y	N
BENZYL CHLORIDE	100-44-7	0.1		Y	N	DIAMINOTOLUENE, [2,4-]	95-80-7	0.02		Y	N	ETHYLENE GLYCOL MONOBUTYL ETHER (Delisted)	111-76-2				
BERYLLIUM COMPOUNDS		0.008	J	N	Y	DIAZOMETHANE	334-88-3	1		Y	N	ETHYLENE GLYCOL MONOHEXYL ETHER	112-25-4	5	P	Y	N
BERYLLIUM SALTS		2E-05	J	N	Y	DIBENZ(A,H)ANTHRACENE	53-70-3	0.01	V	Y	N	ETHYLENE IMINE [AZIRIDINE]	151-56-4	0.003		Y	N
BIPHENYL, [1,1-]	92-52-4	10	V	Y	N	DIOXINS/FURANS		6E-07	D,V	Y	N	ETHYLENE OXIDE	75-21-8	0.1		Y	N
BIS(CHLOROETHYL)ETHER	111-44-4	0.06		Y	N	DIBENZOFURAN	132-64-9	5	V	Y	N	ETHYLENE THIOUREA	96-45-7	0.6		Y	Y
BIS(CHLOROMETHYL)ETHER	542-88-1	0.0003		Y	N	DIBROMO-3-CHLOROPROPANE, [1,2-]	96-12-8	0.01		Y	N	FORMALDEHYDE	50-00-0	2		Y	N
BROMOFORM	75-25-2	10		Y	N	DIBROMOETHANE, [1,2-]	106-93-4	0.1		Y	N	GLYCOL ETHER (ETHYLENE GLYCOL ETHERS)		5	P	Y	N
BROMOMETHANE	74-83-9	10		Y	N	DIBUTYL PHTHALATE	84-74-2	10		Y	Y	GLYCOL ETHER (DIETHYLENE GLYCOL ETHERS)		5	P	Y	N
BUTADIENE, [1,3-]	106-99-0	0.07		Y	N	DICHLOROBENZENE, [1,4-]	106-46-7	3		Y	N	HEPTACHLOR	76-44-8	0.02		Y	N
BUTOXYETHANOL ACETATE, [2-]	112-07-2	5	P	Y	N	DICHLOROBENZIDENE, [3,3-]	91-94-1	0.2	V	Y	Y	HEXACHLOROBENZENE	118-74-1	0.01		Y	N
BUTYLENE OXIDE, [1,2-]	106-88-7	1		Y	N	DICHLOROETHANE, [1,1-]	75-34-3	1		Y	N	HEXACHLOROBUTADIENE	87-68-3	0.9		Y	N
CADMIUM COMPOUNDS		0.01	K	N	Y	DICHLOROETHANE, [1,2-]	107-06-2	0.8		Y	N	HEXACHLOROCYCLOHEXANE, [ALPHA-]	319-84-6	0.01	F	Y	N
CALCIUM CYANAMIDE	156-62-7	10		Y	Y	DICHLOROETHYLENE, [1,1-]	75-35-4	0.4		Y	N	HEXACHLOROCYCLOHEXANE, [BETA-]	319-85-7	0.01	F	Y	N
CAPROLACTAM (Delisted)	105-60-2					DICHLOROMETHANE	75-09-2	10		N	N	HEXACHLOROCYCLOHEXANE, [DELTA-]	319-86-8	0.01	F	Y	N
CAPTAN	133-06-2	10		Y	Y	DICHLOROPHENOXY ACETIC ACID, [2,4-]	94-75-7	10	C	Y	Y	HEXACHLOROCYCLOHEXANE, [TECHNICAL]	608-73-1	0.01	F	Y	N

Appendix B: Table of Hazardous Air Pollutants and Screening Model Action Levels (May 3, 2012 Revision 10)

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

Mr. John Heitert
Equipment, Warehouse & Maintenance Manager
Alberici Constructors, Inc.
2150 Keinlen Avenue
St. Louis, MO 63121-5505

RE: New Source Review Permit - Project Number: 2014-05-077

Dear Mr. Heitert:

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 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 Cheryl Steffan, 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:csl

Enclosures

c: St. Louis Regional Office
PAMS File: 2014-05-077

Permit Number: