



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: 052009-004 Project Number: 2008-02-013

Parent Company: EPC

Parent Company Address: 1408 Zimmerman Dr. South, Grinnell, IA 50112

Installation Name: EPC - Columbia

Installation Address: 4000 Waco Road, Columbia, MO 65202

Location Information: Boone County, S21, T49N, 12W

Application for Authority to Construct was made for:
Addition of eight spray guns. 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.

MAY 11 2009

EFFECTIVE DATE



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 this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located with 15 days after the actual start up of this (these) air contaminant source(s).

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 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 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.

Page No.	3
Permit No.	
Project No.	2008-02-013

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."

EPC- Columbia
Boone County, S21, T49N, 12W

1. **Superseding Condition**
The conditions of this permit supersede all special conditions found in the previously issued construction permit (Permit Numbers 1294-180, 1196-002, 0198-012, 012000-022 and 022003-003), Special Conditions 1 through 4 for Permit Number 0897-022, and Special Condition 1 for Permit No. 052002-007 from the Air Pollution Control Program.

2. **VOC and HAP Emission Limitations**
 - A. EPC- Columbia shall emit less than 40.0 tons of Volatile Organic Compounds (VOCs) from the installation as stated in 2.D in any consecutive 12-month period.

 - B. EPC- Columbia shall emit less than ten (10.0) tons individually or twenty-five (25.0) tons combined of Hazardous Air Pollutants (HAPs) from the installation as stated in 2.D in any consecutive 12-month period.

 - C. EPC- Columbia shall emit less than 0.02 tons of 1,6-diisocyanate hexamethylene (HDI) from the installation as stated in 2.D in any consecutive 12-month period.

 - D. The installation at the time of this permit consists of ten (10) total spray guns and the associated spray booths.

 - E. When considering using alternative material (hardener, thinner, or paint) at this installation that is different to those listed in the Application for Authority to Construct, EPC- Columbia must calculate the potential emissions for each individual HAP in the alternative material that has a Screen Modeling Action Level (SMAL) as listed in Attachment E. EPC- Columbia may scale the potential emissions of the individual HAP with a

Page No.	4
Permit No.	
Project No.	2008-02-013

SPECIAL CONDITIONS:

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

SMAL to into account for the limitations stated in Special Condition 2. If the potential HAP emissions for the alternative material is equal to or greater than the Screen Modeling Action Levels (SMAL), then EPC-Columbia must seek approval from the Air Pollution Control Program before use of the alternative material.

- F. Attachments A, B, C and D or equivalent forms approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 2.A, 2.B and 2.C. EPC- Columbia shall maintain all records required by this permit for not less than five (5) 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 in this equipment.
 - G. EPC- Columbia shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 2.E indicate that the source exceeds the limitation of Special Conditions Number 2.A, 2.B and/or 2.C.
3. Control Device Requirements
EPC-Columbia shall control emissions from the spray guns using paint booths (EP-02) equipped with panel filters as specified in the permit application. These paint booths and panel filters shall be maintained in accordance with the manufacturer's specifications. Replacement filters shall be kept on hand at all times.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2008-02-013
Installation ID Number: 019-0062
Permit Number:

EPC- Columbia
4000 Waco Road
Columbia, MO 65202

Complete: February 5, 2008

Parent Company:
EPC
1408 Zimmerman Dr. South
Grinnell, IA 50112

Boone County, S21, T49N, 12W

REVIEW SUMMARY

- EPC- Columbia has applied for authority to install eight (8) spray guns.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are xylene, hexamethylene diisocyanate (HDI), toluene and glycol ethers.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- Panel filters located in the spray booths are being used to control the particulate matter less than ten (10) microns in diameter (PM₁₀) emissions from the spray guns.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of VOCs and HAPs are conditioned to below de minimis levels.
- This installation is located in Boone County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].

- Ambient air quality modeling was not performed since potential emissions of the application are conditioned to below de minimis levels.
- Emissions testing is not required for the source.
- No Operating Permit is required for this installation since the installation has limited VOCs and HAPs to below de minimis levels.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Engineered Plastics Company of Columbia, EPC-Columbia, (formerly known as Collins & Aikman) manufactures interior plastic parts for the automotive industry and include processes such as shell making, clearcoat and topcoat application, injection molding, form pour molding, sealing and finish assembly.

Prior to this permit, EPC-Columbia was considered a minor installation under New Source Review permitting. However, the facility is taking limitations on VOC and HAPs in this permit to below de minimis levels. Therefore, this facility is now considered a de minimis source and does not require an Operating Permit.

An Intermediate Operating Permit (OP2006-017) was issued in March of 2006 and an amendment to that Operating Permit in September of 2006. The following construction permits have been issued to Collins & Aikman from the Air Pollution Control Program.

Table 1: Previously Issued New Source Review Permits

Permit Number	Description
1294-018	foam spray into mold
1196-002	new selective sealing process with and adhesive spray system
0897-022	parts cleaning area
0198-012	new adhesives for selective sealing process
012000-022	new adhesive application process
052002-007	plant expansion
022003-003	Installation of a new paint booth for the spray coating of shells

Please note that the equipment from the following permits have been rendered inoperable: 1294-180, 1196-002, 0198-012 and 012000-022.

PROJECT DESCRIPTION

EPC-Columbia is adding eight (8) new spray guns in addition to the two existing spray guns presently at the facility. The ten spray guns will be emitted out of stacks no 2A3, 3A3, 3B3, 4A3, 4B3 and 5A3 (EP-02a, b, c, d, e and f, respectively). This permit allows for the installation of both hand-held and robotic spray guns. However, this permit does not allow for the spray guns to be used interchangeably between the two modes of

operation. Therefore, if EPC-Columbia would like to switch the method of operation (i.e. a handheld to robotic or vice versa), their permit will have to be reevaluated by the Air Pollution Control Program. The potential emissions are based on the maximum hourly design rate (MHDRs) of the spray guns. Note that these are elevated MHDRs since the facility does not take into account operational limitations such as prep and drying times. The MHDRs for the paint, hardener and thinner are 37.3, 7.5 and 9.1 gallons per hour (gph), respectively, for all spray guns including the existing one located at the installation.

EPC obtains contracts from the automotive industry for different manufacturers/models, each of which require a different spray booth. In the past, the facility would obtain a construction permit for each spray paint booth and mold. With this permit, the spray guns are being permitted instead of the spray booths. This allows the facility to change out spray paint booths according to each job but maintain the same number of total spray guns. All spray guns are required to operate only when located inside a spray booth equipped with panel filters.

EMISSIONS/CONTROLS EVALUATION

The VOC and HAP emission factors used in this analysis were estimated using information obtained from the Material Safety Data Sheets for the hardener, thinner and paints to be used with the spray guns. A mass balance approach was used to conservatively estimate that 100% of the VOC and HAP content of the paints would be emitted into the atmosphere.

PM₁₀ emissions are evaluated based on the solids content of the hardener, thinner and paints and a transfer efficiency from the spray gun (50%). When the solids content of the material was not stated, it was conservatively estimated by taking the density of the material, subtracting the VOC content and water content (if known) and assuming the remainder to be all PM₁₀. PM₁₀ emissions are controlled through the use of panel filters that have at least ninety percent (90%) control efficiency.

Using the Material Safety Data Sheets (MSDS) provided by EMC-Columbia, potential emissions of each pollutant were determined for each material. The highest potential emissions for total VOCs, combined HAPs, individual HAPs and PM₁₀ were then used to determine the worst case potential emissions for each pollutant.

The existing potential emissions are taken from Permit No. 022003-003. These include conditioned potential emissions of 40 tons per year for VOCs and a 10/25 tons per year for individual and combined HAPs, respectively. Existing actual emissions were taken from the 2006 Emissions Inventory Questionnaire (EIQ). Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). The new potential emissions of the installation account for all equipment at the installation. It has been adjusted due to the rendering inoperable of several processes (see Installation Description). The following table provides an emissions summary for this project.

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions of the Installation	Existing Actual Emissions (2006 EIQ)	Potential Emissions of the Application	New Potential Emissions of the Installation
PM ₁₀	15.0	2.74	0.18	1.05	1.15
SO _x	40.0	0.09	0.00	N/A	0.01
NO _x	40.0	15.09	2.32	N/A	1.31
VOC	40.0	205.88	10.89	<40	<40.0
CO	100.0	4.1	1.95	N/A	1.10
HAPs	10.0/25.0	<Major	N/D	<10.0/25.0	<10.0/25.0
Xylene	10.0	N/D	N/D	0.84	<10
HDI*	0.02	N/D	N/D	<0.02	<0.02
Toluene	10.0	N/D	N/D	<10.0	<10
Glycol Ethers*	5.0	N/D	N/D	1.23	N/D

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

*The regulatory levels listed for the individual HAPs are Screen Modeling Action Levels (SMAL), not de minimis levels. EPC-Columbia has elected to take a limit for HDI to avoid modeling. Because of the VOC and HAP limits, the other individual HAPs do not have the potential to exceed their SMAL and therefore do not require additional limits.

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 VOCs and HAPs have been conditioned to below de minimis levels.

APPLICABLE REQUIREMENTS

EPC- Columbia 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
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.
- *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 10-3.090

SPECIFIC REQUIREMENTS

- *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.

Susan Heckenkamp
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated January 31, 2008, received February 5, 2008, designating EPC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Northeast Regional Office Site Survey, dated February 21, 2008.

Attachment D – Hazardous Air Pollutants (HAP) Calculation Sheet

EPC- Columbia
Boone County, S21, T49N, 12W
Project Number: 2008-02-013
Installation ID Number: 019-0062
Permit Number:

Date: _____

HAP Name and CAS #: _____

Copy this sheet as needed.

Column 1	Column 2 (a)	Column 3	Column 4	Column 5 (b)	Column 6	Column 7	Column 8	Column 9 (c)
Material Used (Name, Type)	Application Rate (Gallons per hour)	Density (Pounds per gallon)	Individual HAP Content (Weight %)	Individual HAP Emissions (Tons per Year)	VOC Content (Weight %)	VOC Emissions (Ton per Year) for the Material	Scaled Individual HAP Emissions (Tons Per Year)	Screen Modeling Action Level (Tons per Year)
<i>Example, paint ABC</i>	37.3	9.01	1.4	20.6	14.4	212.0	3.9	5

Instructions: Calculate the potential emissions of each individual HAP contained in the material

- a) Note: The maximum hourly design rate is equal to 7.5 gallons per hour (gph) for the hardener, 9.1 gph for the thinner and 37.3 gph for each of the paints.
- b) $[\text{Column 2}] \times [\text{Column 3}] \times [\text{Column 4}] \times [4.38] / 100 = [\text{Column 5}]$.
- c) Screen Modeling Action Levels for individual HAPs can be found in Attachment D.
- d) Compare potential emissions of the individual HAP in [Column 5] to those from [Column 9].
- e) If [Column 5] is greater than [Column 9], then try scaling as detailed in (f) through (h).
- f) $[\text{Column 2}] \times [\text{Column 3}] \times [\text{Column 6}] \times [4.38] / 100 = [\text{Column 7}]$
- g) $40 \times [\text{Column 5}] / [\text{Column 7}] = [\text{Column 8}]$
- h) Compare potential emissions of the scaled individual HAP in [Column 8] to those from [Column 9].
- i) If [Column 8] is greater than [Column 9], obtain permission from Air Pollution Control program before using this material.

Attachment E: Screen Modeling Action Levels

Chemical	CAS#	Emission Threshold Levels (tpy)	Synonyms
Acetaldehyde	75-07-0	9	Acetic Aldehyde, Aldehyde, Ethanal, Ethyl Aldehyde
Acetamide	60-35-5	1	Acetic Acid Amide, Ethanamide
Acetonitrile	75-05-8	4	Methyl Cyanide, Ethanenitrile, Cyanomethane
Acetophenone	98-86-2	1	Acetylbenzene, Methyl Phenyl Ketone, Hypnone
Acetylaminofluorine, [2-]	53-96-3	0.005	N-2-Fluorenyl Acetaminde, N-Fluroen-2-yl Acetamide, 2-Acetamideofluorene
Acrolein	107-02-8	0.04	Acrylaldehyde, Acrylic Aldehyde, Allyl Aldehyde, Propenal
Acrylamide	79-06-1	0.02	Propenamide, Acrylic Amide, Acrylamide Monomer, Ethylenecarboxamide
Acrylic Acid	79-10-7	0.6	Propenoic Acid, Ethylene Carboxylic Acid, Vinylformic Acid
Acrylonitrile	107-13-1	0.3	Vinyl Cyanide, Cyanoethylene, Propenenitrile
Allyl Chloride	107-05-1	1	1-Chloro-2-Propene, 3-Chloropropylene, Chloroallylene, Alpha-Propylene
Aminobiphenyl, [4-]	92-67-1	1	Biphenylene, P -Phenylaniline, Xenylamine, 4-Aminodiphenyl, 4-Biphenylamine
Aniline	62-53-3	1	Aminobenzene, Phenylamine, Aniline Oil, Aminophen, Arylamine
Anisidine, [Ortho-]	90-04-0	1	O-Methoxyaniline
Antimony Compounds (except those specifically listed)		5	Antimony (Pentachloride, Tribromide, Trichloride, Trifluoride)
Antimony Pentafluoride	7783-70-2	0.1	
Antimony Potassium Tartrate	28300-74-5	1	
Antimony Trioxide	1309-64-4	1	
Antimony Trisulfide	1345-04-6	0.1	
Arsenic and Inorganic Arsenic Compounds		0.005	Arsenic (Diethyl, Disulfide, Pentoxide, Trichloride, Trioxide, Trisulfide), Arsinine, Arsenous Oxide
Benz(a)Anthracene	56-55-3	0.01	
Benz(c)acridine	225-51-4	0.01	
Benzene	71-43-2	2	Benzol, Phenyl Hydride, Coal Naphtha, Phene, Benxole, Cyclohexatriene
Benzidine	92-87-5	0.0003	4,4'-Biphenyldiamine, P-Diaminodiphenyl, 4,4'-Diaminobiphenyl, Benzidine Base

Attachment E: Screen Modeling Action Levels

Chemical	CAS#	Emission Threshold Levels (tpy)	Synonyms
Benzo(a)pyrene	50-32-8	0.01	
Benzo(b)fluoranthene	205-992	0.01	
Benzotrichloride	98-07-7	0.006	Benzoic Trichloride, PhenylChloroform, Trichloromethylbenzene
Benzyl Chloride	100-44-7	0.1	Alpha-Chlorotoluene, Toly Chloride
Beryllium Compounds (except Beryllium Salts)	Chemical	CAS#	Emission Threshold Levels (tons/year)
Beryllium Salts		0.00002	
Bis(Chloroethyl)Ether	111-44-4	0.06	Dichloroethyl ether, Dichloroether, Dichloroethyl Oxide, BCEE
Bis(Chloromethyl)Ether	542-88-1	0.0003	BCME, Sym-Dichloromethyl ether, Dichloromethyl Ether, Oxybis-(Chloromethane)
Butadiene, [1,3-]	106-99-0	0.07	Biethylene, Biviny, Butadiene Monomer, Divinyl Erythrene, Vinylethylene
Butylene Oxide, [1,2-]	106-88-7	1	1,2-Epoxybutane, 1-Butene Oxide, 1,2-Butene Oxide, Butylene Oxide, Ethylethylene
Cadmium Compounds		0.01	Cadmium (Dust, Fume, Acetate, Chlorate, Chloride, Fluoride, Oxide, Sulfate, Sulfide)
Carbon Disulfide	75-15-0	1	Carbon Bisulfide, Dithiocarbonic Anhydride
Carbon Tetrachloride	56-23-5	1	Tetrachloromethane, Perchloromethane
Carbonyl Sulfide	463-58-1	5	Carbon Oxide Sulfide, Carbonoxysulfide
Catechol	120-80-9	5	Pyrocatechol, O-Dihydroxybenzene
Chloramben	133-90-4	1	3-Amino-2,5-Dichlorobenzoic Acid, Amben, Amiben*, Vegiben* (*Trademark)
Chlordane	57-74-9	0.01	ENT9932, Octachlor
Chlorine	7782-50-5	0.1	Bertholite
Chloroacetic Acid	79-11-8	0.1	Monochloroacetic Acid, Chloroethanoic Acid
Chloroacetophenone, [2-]	532-27-4	0.06	Phenacyl Chloride, Chloromethyl Phenyl Ketone, Tear Gas, Mace
Chlorobenzilate	510-15-6	0.4	Ethyl-4,4'-Dichlorobenzilate, Ethyl-4,4'-Dichlorophenyl Glycollate
Chloroform	67-66-3	0.9	Trichloromethane
Chloromethyl Methyl Ether	107-30-2	0.1	CMME, Methyl Chloromethyl Ether, Chloromethoxymethane, Monochloromethyl Ether
Chloroprene	126-99-8	1	2-Chloro-1,3-Butadiene, Chlorobutadiene, Neoprene Rubber Compound

Attachment E: Screen Modeling Action Levels

Chemical	CAS#	Emission Threshold Levels (tpy)	Synonyms
Chromic Chloride	10025-73-7	0.1	
Chromium Compounds (except Hexavalent)		5	Chromium, Chromium(II) Compounds, Chromium (III) Compounds
Chromium Compounds, Hexavalent		0.002	Chromium (VI)
Chrysene	218-01-9	0.01	
Cobalt Carbonyl	12010-68-1	0.1	
Cobalt Metal (and compounds, except those specifically listed)		0.1	Cobalt (Bromide, Chloride, Diacetate, Formate, Nitrate, Oxide, Sulfamate)
Coke Oven Emissions	8007-45-2	0.03	Coal Tar, Coal Tar Pitch, Coal Tar Distillate
Cresol, [Meta-]	108-39-4	1	3-Cresol, M-Cresylic Acid, 1-Hydroxy-3-Methylbenzene, M-Hydroxytoluene
Cresol, [Ortho-]	95-48-7	1	2-Cresol, O-Cresylic Acid, 1-Hydroxy-2-Methylbenzene, 2-Methylphenol
Cresol, [Para-]	106-44-5	1	4-Cresol, P-Cresylic Acid, 1-Hydroxy-4-Methylbenzene, 4-Hydroxytoluene
Cresols/ Cresylic Acid (isomers and mixture)	1319-77-3	1	
Cyanide Compounds (except those specifically listed)	20-09-7	5	Cyanide (Barium, Chlorine, Free, Hydrogen, Potassium, Silver, Sodium, Zinc)
DDE (p,p'-Dichlorodiphenyl Dichloroethylene)	72-55-9	0.01	
Di(2-Ethylhexyl)Phthalate, (DEHP)	117-81-7	5	Bis(2-ethylhexyl)Phthalate, Di(2-Ethylhexyl)Phthalate, DOP, Di-Sec-Octyl Phthalate
Diaminotoluene, [2,4-]	95-80-7	0.02	2,4-Toluene Diamine, 3-Amino-Para-Toluidine, 5-Amino-Ortho-Toluidine
Diazomethane	334-88-3	1	Azimethylene, Diazirine
Dibenz(a,h)anthracene	53-70-3		
Dibenzofuran	132-64-9	5	Diphenylene Oxide

Attachment E: Screen Modeling Action Levels

Chemical	CAS#	Emission Threshold Levels (tpy)	Synonyms
Dibenzopyrene, [1,2:7,8]	189-55-9		
Dibromo-3-Chloropropane, [1,2-]	96-12-8	0.01	DBCP
Dibromomethane, [1,2-]	106-93-4	0.1	Ethylene Dibromide, Ethylene Bromide, Sym-Dibromoethane
Dichlorobenzene, [1,4-]	106-46-7	3	1,4-Dichloro-P-DCB, 1-4-DCB, PDB, PDCB
Dichlorobenzidine, [3,3-]	91-94-1	0.2	4,4'-Diamino-3,3'-Dichlorobiphenyl, 3,3'-Dichlorobiphenyl-4,4'-Diamine, DCB
Dichloroethane, [1,1-]	75-34-3	1	Ethylidene Dichloride, 1,1-Ethylidene Dichloride, Asymmetrical Dichlorethane
Dichloroethane, [1,2-]	107-06-2	0.8	Ethylene Dichloride, Glycol Dichloride, Ethylene Chloride
Dichloroethylene, [1,1-]	75-35-4	0.4	Vinylidene Chloride, DCE, VDC
Dichloropropane, [1,2-]	78-87-5	1	Propylene Dichloride
Dichloropropene [1,3-]	542-75-6	1	1,3-Dichloropropylene, Alpha-Chlorallyl Chloride
Dichlorvos	62-73-7	0.2	DDVP, 2,2-Dichlorovinyl dimethylphosphate
Diethanolamine	11-42-2	5	Bis(2-Hydroxyethyl)Amine, 2,2'-Dihydroxydiethylamine, Di(2-Hydroxyethyl)Amine
Diethyl Sulfate	64-67-5	1	Diethyl Ester Sulfuric Acid, Ethyl Sulfate
Dimethoxybenzidine, [3,3-]	119-90-4	0.1	Fast Blue B Base, Dianisidine, O-Dianisidine
Dimethylbenz(a)anthracene, [7,12]	57-97-6	0.01	
Dimethyl Benzidine, [3,3-]	119-93-7	0.008	O-Tolidine, Bianisidine, 4,4'-Diamino-3,3'-Dimethylbiphenyl, Diaminoditoyl
Dimethyl Carbamoyl Chloride	79-44-7	0.02	DMCC, Chloroformic Acid Dimethyl Amide, Dimethyl Carbamyl Chloride
Dimethyl Formamide	68-12-2	1	DMF, Formyldimethylamine
Dimethyl Hydrazine, [1,1-]	57-14-7	0.008	Unsymmetrical Dimethylhydrazine, UDMH, Dimazine
Dimethyl Sulfate	77-78-1	0.1	Sulfuric Acid Dimethyl Ester, Methyl Sulfate
Dimethylaminoazobenzene, [4-]	60-11-7	1	N,N-Dimethyl-P-Phenylazo-Aniline, Benzeneazo Dimethylaniline
Dimethylaniline, [N,N-]	121-69-7	1	N,N-Diethyl Aniline, N,N-Dimethylphenylamine, DMA
Dinitro-O-Cresol, [4,6-] and salts	534-52-1	0.1	DNOC, 3,5-Dinitro-O-Cresol, 2-Methyl-4,6-Dinitrophenol

Attachment E: Screen Modeling Action Levels

Chemical	CAS#	Emission Threshold Levels (tpy)	Synonyms
Dinitrophenol, [2,4-]	51-28-5	1	DNP
Dinitrotoluene, [2,4-]	121-14-2	0.02	Dinitrotoluol, DNT, 1-Methyl-2,4-Dinitrobenzene
Dioxane, [1,4-]	123-91-1	6	1,4-Diethyleneoxide, Diethylene Ether, P-Dioxane
Diphenylhydrazine, [1,2-]	122-66-7	0.09	Hydrazobenzene, N,N'-Diphenylhydrazine, N,N'-Bianiline, 1,1'-Hydrodibenzene
Diphenylmethane Diisocyanate, [4,4-]	101-68-8	0.1	Methylene Bis(Phenylisocyanate), Methylene Diphenyl Diisocyanate, MDI
Epichlorohydrin	106-89-8	2	1-Chloro-2,3-Epoxypropane, EPI, Chloropropylene Oxide, Chloromethyloxirane
Ethyl Acrylate	140-88-5	1	Ethyl Propenoate, Acrylic Acid Ethyl Ester
Ethylene Imine (Aziridine)	151-56-4	0.003	Azacyclopropane, Dimethyleneimine, Ethylenimine, Vinylamine, Azirane
Ethylene Oxide	75-21-8	0.1	1,2-Epoxyethane, Oxirane, Dimethylene Oxide, Anprolene
Ethylene Thiourea	96-45-7	0.6	2-Imidazolidinethione, ETU
Fluomine	62207-76-5	0.1	
Formaldehyde	50-00-0	2	Oxymethylene, Formic Aldehyde, Methanal, Methylene Oxide, Oxomethane
Glycol Ethers (except those specifically listed)		5	
Heptachlor	76-44-8	0.02	1,4,5,6,7,8,8A-Heptachloro-3A,4,7,7A-Tetrahydro-4,7-Methanoindiene
Hexachlorobenzene	118-74-1	0.01	Perchlorobenzene, HCB, Pentachlorophenyl Benzene, Phenyl Perchloryl
Hexachlorobutadiene	87-68-3	0.9	Perchlorobutadiene, 1,3-Hexachlorobutadiene, HCB
Hexachlorocyclopentadiene	77-47-4	0.1	HCCPD, HEX
Hexachloroethane	67-72-1	5	Perchloroethane, Carbon Hexachloride, HCE, 1,1,1,2,2,2-Hexachloroethane
Hexamethylene Diisocyanate, 1,6-	822-06-0	0.02	1,6-Diisocyanatohexane, 1,6-Hexanediol Diisocyanate
Hexamethylphosphoramide	680-31-9	0.01	Hexamethylphosphoric Triamide, HEMPA, Hexametapol, Hexamethylphosphoramide
Hydrazine	302-01-2	0.004	Methylhydrazine, Diamide, Diamine, Hydrazine Base
Hydrogen Fluoride	7664-39-3	0.1	Hydrofluoric Acid Gas, Fluorhydric Acid Gas, Anhydrous Hydrofluoric Acid
Hydrogen Selenide	7783-07-5	0.1	

Attachment E: Screen Modeling Action Levels

Chemical	CAS#	Emission Threshold Levels (tpy)	Synonyms
Hydroquinone	123-31-9	1	Quinol, Hydroquinol, P-Diphenol, 1,4-Benzenediol, Hydrochinone, Arctuin
Indeno(1,2,3-cd)Pyrene	193-39-5	0.01	
Lead and Compounds (except those specifically listed)	20-11-1	0.01	Lead (Acetate, Arsenate, Chloride, Fluoride, Iodide, Nitrate, Sulfate, Sulfide)
Lindane [Gamma-Hexachlorocyclohexane]	58-89-9	0.01	Benzene Hexachloride – Gamma Isomer
Maleic Anhydride	108-31-6	1	2,5-Furandiene, Cis-Butenedioic Anhydride, Toxilic Anhydride
Manganese and Compounds (except those specifically listed)	20-12-2	0.8	Manganese (Acetate, Chloride, Dioxide, (II)-Oxide, (III)-Oxide, (II)-Sulfate)
Mercury Compounds (except those specifically listed)	20-13-3	0.01	Mercury Compounds (Methyl-, Ethyl-, Phenyl-)
Mercury Compounds (Inorganic)	20-13-3	0.01	Mercury (Chloride, Cyanide, (I,II)-[Bromide, Iodide, Nitrate, Sulfate], Oxide)
Methyl Hydrazine	60-34-4	0.06	Monomethylhydrazine, Hydrozomethane, 1-Methylhydrazine
Methyl Iodide	74-88-4	1	Idomethane
Methyl Isocyanate	624-83-9	0.1	Isocyanatomethane, Isocyanic Acid, Methyl Ester
Methylcyclopentadienyl Manganese	12108-13-3	0.1	
Methylene Bis(2-Chloroaniline), [4,4-]	101-14-4	0.2	Curene, MOCA, 4,4'-Diamino-3,3'-Dichlorodiphenylmethane
Methylenedianiline, [4,4-]	101-77-9	1	4,4'-Diaminodipheylmethane, DDM, MDA, Bis(4-Aminophenyl)Methane,
Nickel Carbonyl	13463-39-3	0.1	
Nickel Compounds (except those specifically listed)		1	Nickel (Acetate, Ammonium Sulfate, Chloride, Hydroxide, Nitrate, Oxide, Sulfate)
Nickel Refinery Dust	12035-72-2	0.08	

Attachment E: Screen Modeling Action Levels

Chemical	CAS#	Emission Threshold Levels (tpy)	Synonyms
Nickel Subsulfide		0.04	
Nitrobenzene	98-95-3	1	Nitrobenzoil, Oil of Mirbane, Oil of Bitter Almonds
Nitrobiphenyl, [4-]	92-93-3	1	4-Nitrodiphenyl, P-Nitrobiphenyl, P-Nitrophenyl, PNB
Nitrophenol, [4-]	100-02-7	5	4-Hydroxynitrobenzene, Para-Nitrophenol
Nitropropane, [2-]	79-46-9	1	Dimethylnitromethane, Sec-Nitropropane, Isonitropropane, Nitroisopropane
Nitroso-N-Methylurea, [N-]	684-93-5	0.0002	N-Methyl-N-Nitrosourea, N-Nitroso-N-Methylcarbamide
Nitrosodimethylamine, [N-]	62-75-9	0.001	Dimethylnitrosamine, DMN, DMNA
Nitrosomorpholine, [N-]	59-89-2	1	4-Nitrosomorpholine
Parathion	56-38-2	0.1	DNTP, Monothiophosphate, Diethyl-P-Nitrophenyl
PCB (Polychlorinated Biphenyls)	1336-36-3	0.009	Aroclors
Pentachloronitrobenzene	82-68-8	0.3	Quintobenzene, PCNB, Quiniozene
Pentachlorophenol	87-86-5	0.7	PCP, Penchlorol, Pentachlorophenate, 2,3,4,5,6-Pentachlorophenol
Phenol	108-95-2	0.1	Carbolic Acid, Phenic Acid, Phenylic Acid, Phenyl Hydrate, Hydroxybenzene
Phenyl Mercuric Acetate	62-38-4	0.01	
Phosgene	75-44-5	0.1	Carbonyl Chloride, Carbon Oxychloride, Carbonic Acid Dichloride
Phosphine	7803-51-2	5	Hydrogen Phosphide, Phosphoretted Hydrogen, Phosphorus Trihydride
Phosphorous (Yellow or White)	7723-14-0	0.1	
Phthalic Anhydride	85-44-9	5	Phthalic Acid Anhydride, Benzene-O-Dicarboxylic Acid Anhydride, Phthalandione
Polycyclic Organic Matter (except those specifically listed)	TP15	0.01	POM, PAH, Polyaromatic Hydrocarbons,
Potassium Cyanide	151508	0.1	
Propane Sultone, [1,3-]	1120-71-4	0.03	1,2-Oxathiolane-2,2-Dioxide, 3-Hydroxy-1-Propanesulphonic Acid Sultone
Propiolactone, [Beta-]	57-57-8	0.1	2-Oxeatanone, Propiolactone, BPL, 3-Hydroxy-B-Lactone-Propanoic Acid
Propionaldehyde	123-38-6	5	Propanal, Propyl Aldehyde, Propionic Aldehyde
Propylene Oxide	75-56-9	5	1,2-Epoxypropane, Methylethylene Oxide, Methyl Oxirane, Propene Oxide
Propyleneimine, [1,2-]	75-55-8	0.003	2-Methyl Aziridine, 2-Methylazacyclopropane, Methylethyleneimine

Attachment E: Screen Modeling Action Levels

Chemical	CAS#	Emission Threshold Levels (tpy)	Synonyms
Quinoline	91-22-5	0.006	1-Azanaphthalene, 1-Benzazine, Benzo(B)Pyridine, Chinoleine, Leucoline
Quinone	016-51-4	5	Benzoquinone, Chinone, P-Benzoquinone, 1,4-Benzooquinone
Selenium and Compounds (except those specifically listed)	7782-49-2	0.1	Selenium (Metal, Dioxide, Disulfide, Hexafluoride, Monosulfide)
Sodium Cyanide	143339	0.1	
Sodium Selenate	13410010	0.1	
Sodium Selenite	10102018 8	0.1	
Styrene	100-42-5	1	Cinnamene, Cinnamol, Phenethylene, Phenylethylene, Vinylbenzene
Styrene Oxide	96-09-3	1	Epoxyethylbenzene, Phenylethylene Oxide, Phenyl Oxirane, Epoxystyrene
Tetrachlorodibenzo-P-Dioxin	1746-01-6	6.00E-07	
Tetrachloroethane, [1,1,2,2-]	79-34-5	0.3	Sym-Tetachloroethane, Acetylene Tetrachloride, Ethane Tetrachloride
Tetraethyl Lead	78-00-2	0.01	
Tetramethyl Lead	75-74-1	0.01	
Titanium Tetrachloride	7550-45-0	0.1	Titranium Chloride
Toluene Diisocyanate, [2,4-]	584-84-9	0.1	TDI, Tolyene Diisocyante, Diisocyanatoluene
Toluidine, [Ortho-]	95-53-4	4	Ortho-Aminotoluene, Ortho-Methylaniline, 1-Methyl-1,2-Aminobenzene
Toxaphene	8001-35-2	0.01	Chlorinated Camphene, Camphechlor, Polychlorcamphene
Trichloroethane, [1,1,2-]	79-00-5	1	Vinyl Trichloride, Beta-Trichloroethane
Trichlorophenol, [2,4,5-]	95-95-4	1	2,4,5-TCP
Trichlorophenol, [2,4,6-]	88-06-2	6	2,4,6-TCP
Trifluralin	1582-09-8	9	2,6-Dinitro-N-N-Dipropyl-4-(Trifluoromethyl)Benzeneamine
Trimethylpentane, [2,2,4-]	540-84-1	5	Isobutyltrimethylethane, Isoctane
Urethane [Ethyl Carbamate]	51-79-6	0.8	Ethyl Urethane, O-Ethylurethane, Leucothane, NSC 746, Urethan

Attachment E: Screen Modeling Action Levels

Chemical	CAS#	Emission Threshold Levels (tpy)	Synonyms
Vinyl Acetate	108-05-4	1	Acetic Acid Vinyl Ester, Vinyl Acetate Monomer, Ethenyl Ethanoate
Vinyl Bromide	593-60-2	0.6	Bromoethylene, Bromoethene
Vinyl Chloride	75-01-4	0.2	Chloroethylene, Chloroethene, Monochloroethylene

Mr. Randy Nelson
Plant Manager
EPC- Columbia
4000 Waco Road
Columbia, MO 65202

RE: New Source Review Permit - Project Number: 2008-02-013

Dear Mr. Nelson:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files.

Operation in accordance with these conditions and your new source review permit application 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 Susan Heckenkamp at the Departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:smhk

Enclosures

c: Northeast Regional Office
PAMS File: 2008-02-013

Permit Number: