



## PART 70 PERMIT TO OPERATE

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

**Operating Permit Number:** OP2017-015

**Expiration Date:** MAR 13 2022

**Installation ID:** 007-0003

**Project Number:** 2011-11-010

**Installation Name and Address**

HarbisonWalker International, Inc.  
1000 Booker Street  
Vandalia, MO 63382  
Audrain County

**Parent Company's Name and Address**

HarbisonWalker International, Inc.  
1305 Cherrington Parkway  
Suite 100  
Moon Township, PA 15108

**Installation Description:**

The installation manufactures predominantly high percentage alumina and minor quantities of silica refractory shapes and specialty products such as refractory plastics, mortars and taphole ramming mixes. A wide variety of conveying, drying, milling, mixing, shaping equipment and firing kilns are used in the process. The installation has the potential to emit major levels of Volatile Organic Compounds (VOC), Particulate Matter less than or equal to 10 microns (PM<sub>10</sub>), and Particulate Matter less than or equal to 2.5 microns (PM<sub>2.5</sub>). The facility has taken a voluntary condition to limit emission of Hazardous Air Pollutants (HAPs) to less than major levels.

Prepared by  
David Buttig  
Operating Permit Unit

Director or Designee  
Department of Natural Resources

**MAR 13 2017**

Effective Date

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## I. Installation Description and Equipment Listing

### EMISSION UNITS WITH LIMITATIONS

The following list provides a description of the equipment at this installation that emits air pollutants and that are identified as having unit-specific emission limitations.

Reference	Unit Description
BIQ	
B	#2 Tunnel Kiln
C	#3 Tunnel Kiln
D	#4 Tunnel Kiln
E	#5 Periodic Bell Kiln
K	Bickley Bell Kiln
Q	Lab Test Kiln
S	Bickley Shuttle Kiln
F	East Pallet Dryer
H	#3 Tunnel Kiln Double Dryer
M	South Tunnel Dryer
N-1	Tunnel Dryer (Compartment 1 of 2)
N-2	Tunnel Dryer (Compartment 2 of 2)
O	East Chemical Bond Dryer
P	West Chemical Bond Dryer
R	Sec. 41 Shipping Dryer
DC-46	#1 Mixer Eirich DE-22
DC-47	#2 Mixer Eirich DE-22
DC-48	#3 Mixer Eirich DEV-22
DC-49	#4 Mixer Eirich DEV-22
DC-50	#5 Mixer Eirich DEV-22
DC-51	#6 Mixer Eirich DE-22
DC-52	#7 Mixer Eirich DE-18
DC-19	Wet and Dry Mortars Batching & Mixing (#1 Mortar Mixer)
DC-20	Wet and Dry Mortars Batching & Mixing (#2 Mortar Mixer)
DC-21	Plastics Batching and Mixing
DC-27	Tote Can Sack Breaking
DC-28	Tote Can Bulk Bag
DC-30	Weigh Scales #5 - #8
DC-36	Weigh Scales #1 - #4
DC-44	Automated Batching 10 Station
DC-38	Ball Milling and Screening
DC-11	Ground Material Bins: Conveying and Milling
DC-45	Barmac Crushing/Screening System: Crushing
DC-45	Barmac Crushing/Screening System: Screening
DC-45	Barmac Crushing/Screening System: Conveying
DC-55B	Monoliths Process: Tote Can Fill Station
DC-54	Monoliths: Rollo Mixer
DC-56	Monoliths Process: Ribbon Mixer and Sacking
DC-57	Monoliths: Belt Conveyor and Feed Hopper
DC-58	Monoliths: Bagger

DC-59	Monoliths: Storage Bin
DC-60	Monoliths: Storage Bin
DC-53	Silica Refractories Materials Process: Visil Mixing/Weighing
DC-61	Barmac Crusher Feed Conveying System
L	Rotary Dryer
DC-01	Semco Material Unloading System
DC-02	Silo #3 Vent (M & D Ball Clay)
DC-03	Silo #4 Vent (Kentucky #6 Dark)
DC-04	Silo #1 Vent (Lumnite Cement)
DC-05	Silo #2 Vent (Potters Flint)
DC-06	Silo #6 Vent (Gleason Ball Clay)
DC-07	Silo #5 Vent (A2)
DC-08	Silo #7 Vent (A2)
DC-09	Nordberg Bauxite System, Dry Pan Process & Plastics Manufacturing
DC-10	Milling Process
DC-12	Dried Raw Material Wall Belt System
DC-13	T-64 Nordberg Crushing System
DC-14	Raw Material Bin System
DC-15	North and South Pan Screening
DC-15	North and South Pan Grinding
DC-16	Materials Mixing: #3 Mixer
DC-17	Materials Mixing: #4 Mixer
DC-18	Materials Mixing: #5 Mixer
DC-22	D-1 Bin Vent (Kyanite 100 mesh)
DC-23	D-1 A-2 Bin Vent
DC-24	D-3 M&D Bin Vent
DC-25	A-4 A-2 Bin Vent
DC-26	A-5 Kentucky #6 Dark Bin Vent
DC-29	S.G. Screening – Transfer, Crushing, and Screening
DC-31	S.G. Bin Vent (T-61)
DC-32	S.G. Bin Vent 2 (T-61)
DC-33	Taphole Mixing/Weighing
DC-34	Mold Making Wood Shop
DC-35	A-4 Fillite Mix Bin
DC-39	HB 50 Ton Bin
DC-40	A-5 Gleason Bin
DC-41	East Kiln Car Vacuum System
DC-42	Shipping Grinding Room
DC-43	West Kiln Car Vacuum System

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### EMISSION UNITS WITHOUT SPECIFIC LIMITATIONS

The following list provides a description of the equipment that does not have unit specific limitations at the time of permit issuance.

#### EIQ

<u>Reference</u>	<u>Description of Emission Source</u>
T-08	NXP-Lignin Liquor Tank Aqueous Dispersion; Capacity 10,000 gallons
T-09	Methylnaphthalene Fraction #5 Storage Tank; Capacity 15,000 gallons
T-10	Methylnaphthalene Fraction #2 Storage Tank; Capacity 12,000 gallons
T-11	Sodium Silicate Storage Tank; Capacity 10,000 gallons
T-12	Ethylene Glycol Storage Tank; Capacity 5,000 gallons
T-13	Phosphoric Acid Storage Tank; Capacity 12,000 gallons
T-14	Monoaluminum Phosphate Solution Storage Tank; Capacity 4,000 gallons
T-15	Monoaluminum Phosphate Solution Storage Tank; Capacity 4,000 gallons
T-16	Propane Storage Tank; Capacity 1,000 gallons
T-17	B-500X Brick Release Oil Storage Tank; Capacity 4,000 gallons
T-18	B-500X Brick Release Oil Storage Tank; Capacity 4,000 gallons
T-19	Diesel Fuel Tank; Capacity 1,000 gallons
T-20	Diesel Fuel Tank; Capacity 500 gallons
T-23 to T-26	Four (4) Waste Oil Tanks; Capacity 500 gallons
T-29	B-500X Brick Release Oil Tank; Capacity 500 gallons
T-30	Tall Oil Tank; Capacity 8,000 gallons
T-31	RL-2395 Liquid Phenolic Resin Tank; Capacity 500 gallons
T-32	RL-779A Liquid Phenolic Resin Tank; Capacity 500 gallons
T-37	RL-2395 Liquid Phenolic Resin Tank; Capacity 9,500 gallons

## **II. Plant Wide Emission Limitations**

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued. The plant wide conditions apply to all emission units at this installation. All emission units are listed in Section I under Emission Units with Limitations and Emission Units without Specific Limitations.

None.

### III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

<b>PERMIT CONDITION 1</b> 10 CSR 10-6.065(6)(C)1.A Voluntary Limitation(s)	
EIQ Reference #	Emission Unit Description
B	#2 Tunnel Kiln: Natural gas fired tunnel kiln; 50 MMBtu/hr; Installed 1929
C	#3 Tunnel Kiln: Natural gas fired tunnel kiln; 50 MMBtu/hr; Installed 1951
D	#4 Tunnel Kiln: Natural gas fired tunnel kiln; 40 MMBtu/hr; Installed 1957
E	#5 Bell kiln, Natural gas fired periodic kiln; 3 MMBtu/hr, Installed 2012
K	Bickley Bell Kiln: Natural gas fired periodic kiln; 6 MMBtu/hr; Installed 1969
Q	Lab Test Kiln: Natural gas fired periodic kiln; 2 MMBtu/hr; Installed 1955
S	Bickley Shuttle Kiln: Natural gas fired periodic kiln; 20 MMBtu/hr; Installed 1984

**Operational Limitations:**

- 1) The permittee shall limit the raw clay used in fired refractory shapes to 45,608 tons in any consecutive 12-month period to control hydrogen fluoride and hydrogen chloride emissions.
- 2) The permittee shall limit chromium compounds used in kiln fired refractory shapes for all kilns to 39,907.1 tons in any consecutive 12-month period expressed as chromic oxide equivalents (Cr<sub>2</sub>O<sub>3</sub>).

**Monitoring/Recordkeeping:**

- 1) The permittee shall maintain an accurate record of raw clay used in kiln fired refractory shapes from this installation. The permittee shall record the monthly raw clay used with a consecutive 12-month total. The permittee shall use Attachment F or an equivalent form for this purpose.
- 2) The permittee shall maintain an accurate record of chromic oxide equivalents fired in all kilns from this installation. The permittee shall record the monthly chromic oxide equivalents fired with a consecutive 12-month total. The permittee shall use Attachments D1 and E or an equivalent forms for this purpose.
- 3) The permittee shall maintain these records on site for the most recent 60 months.
- 4) The permittee shall immediately make such records available to any Department of Natural Resources personnel upon request.

**Reporting:**

- 1) The permittee shall report to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month, if the consecutive 12-month total records show that the source exceeded the limitation 46,000 tons of raw clay used in fired refractory shapes.

- 2) The permittee shall report to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month, if the consecutive 12-month total records show that the source exceeded the limitation of 40,000 tons of chromium compounds used in kiln fired refractory shapes for all kilns.
- 3) The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the semi-annual monitoring report and annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

<b>PERMIT CONDITION 2</b>	
10 CSR 10-6.065(6)(C)1.A Voluntary Limitation(s)	
EIQ Reference #	Emission Unit Description
F	East Pallet Dryer: Natural gas fired shapes dryer; 1.05 MMBtu/hr; Installed 1973
H	#3 Tunnel Kiln Double Dryer: Natural gas fired shapes dryer; 4.20 MMBtu/hr; Installed 1951
M	South Tunnel Dryer: Natural gas fired tunnel dryer; 1.00 MMBtu/hr; Installed 1951
N-1	Tunnel Dryer (Compartment 1 of 2): Natural gas fired tunnel dryer; 1.72 MMBtu/hr;
N-2	Tunnel Dryer (Compartment 2 of 2): Natural gas fired tunnel dryer; 1.72 MMBtu/hr;
O	East Chemical Bond Dryer: Natural gas fire dryer; 1.05 MMBtu/hr; Installed 1967
P	West Chemical Bond Dryer: Natural gas fire dryer; 1.05 MMBtu/hr; Installed 1973
R	Sec. 41 Shipping Dryer: Natural gas fire dryer; 0.25 MMBtu/hr; Installed 1969

**Operational Limitations:**

The permittee shall limit chromium compounds used in refractory shapes dryers for all shapes dryers to 61,800 tons in any consecutive 12-month period expressed as chromic oxide equivalents (Cr<sub>2</sub>O<sub>3</sub>).

**Monitoring/Recordkeeping:**

The permittee shall maintain an accurate record of chromic oxide equivalents dried in all shapes dryers from this installation. The permittee shall record the monthly chromic oxide equivalents dried with a consecutive 12-month total. The permittee shall use Attachments D1 and E or an equivalent forms for this purpose.

- 1) The permittee shall maintain these records on site for the most recent 60 months.
- 2) The permittee shall immediately make such records available to any Department of Natural Resources personnel upon request.

**Reporting:**

- 1) The permittee shall report to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month, if the consecutive 12-month total records show that the source exceeded the limitation 61,800 tons of chromium compounds used in refractory shapes dryers for all shapes dryers.
- 2) The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the semi-annual monitoring report and annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

<b>PERMIT CONDITION 3</b>		
10 CSR 10-6.065(6)(C)1.A Voluntary Limitation(s)		
<b>REFRACTORY SHAPES MIXERS</b>		
EIQ Reference #	Emission Unit Description	Manufacturer/ Model #
DC-46	#1 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DE-22
DC-47	#2 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DE-22
DC-48	#3 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DEV-22
DC-49	#4 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DEV-22
DC-50	#5 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DEV-22
DC-51	#6 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DE-22
DC-52	#7 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DE-18

**Operational Limitations:**

The permittee shall limit chromium compounds used in mixers that process refractory shapes mixes to 128,772 tons in any consecutive 12-month period expressed as chromic oxide equivalents (Cr<sub>2</sub>O<sub>3</sub>).

**Monitoring/Recordkeeping:**

- 1) The permittee shall maintain an accurate record of chromic oxide equivalents mixed in all refractory shapes mixers from this installation. The permittee shall record the monthly chromic oxide equivalents mixed with a consecutive 12-month total. The permittee shall use Attachments D1 and E or an equivalent forms for this purpose.
- 2) The permittee shall maintain these records on site for the most recent 60 months.
- 3) The permittee shall immediately make such records available to any Department of Natural Resources personnel upon request.

**Reporting:**

- 1) When the consecutive 12-month total records show that the source exceeded the limitation of 128,800 tons of chromium compounds, expressed as chromic oxide (Cr<sub>2</sub>O<sub>3</sub>), used in mixers that process refractory shapes mixes, the permittee shall report to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month.
- 2) The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the semi-annual monitoring report and annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

<b>PERMIT CONDITION 4</b> 10 CSR 10-6.060 <i>Construction Permits Required</i> Construction Permit Number 0199-015, Issued December 30, 1998		
<b>REFRACTORY SHAPES MIXERS</b> <b>GROUND MATERIAL BINS AND BARMAC CRUSHING &amp; SCREENING</b>		
EQ Reference #	Emission Unit Description	Manufacturer/ Model #
DC-11	Ground Material Bins: Conveying: belt conveyor, elevator, screen, consigners, bins, shredder and Sturdevent mill; Maximum Hourly Design Rate = 27.0 ton/hr; Installed 1951, modified 1998	N/A
DC-45	Barmac Crushing and Screening System: surge hopper with feeder, Barmac crusher, elevator, screen, 3-belt conveyors, consigners and bins; Maximum Hourly Design Rate = 100 ton/hr; Installed 1999	N/A
DC-46	#1 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DE-22
DC-47	#2 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DE-22
DC-48	#3 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DEV-22
DC-49	#4 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DEV-22
DC-50	#5 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DEV-22
DC-51	#6 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DE-22
DC-52	#7 Mixer; Batch dump system and mixer; MHDR – 6.00 ton/hr; Installed 1999	Eirich DE-18

**Operational Requirements:**

- 1) The permittee shall operate the dust collectors at all times when the associated processes are in operation. The dust collectors shall be operated and maintained in accordance with the manufacturer’s specifications.
- 2) The dust collectors shall be equipped with a gauge or meter which indicates the pressure drop across the dust collectors. This gauge or meter shall be located such that it may be easily observed by the Department of Natural Resources’ employees.
- 3) The operating pressure drop shall be maintained within the design conditions specified by the manufacturer’s performance warranty.
  - a) DC-11 shall maintain a pressure drop in the range of 2-8 in w.c.
  - b) DC-45 through DC-52 shall maintain a pressure drop in the range of 1-6 in w.c.
- 4) Replacement fabric filters for the dust collectors shall be kept on hand at all times. The dust collectors shall be appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance).

**Monitoring/Recordkeeping:**

- 1) The permittee shall monitor and record the operating pressure drop across the dust collectors at least once every twenty-four hours using Attachment G, or an equivalent form for this purpose.
- 2) The permittee shall maintain an operating and maintenance log (Attachment C, or equivalent) for the dust collectors which shall include the following:
  - a) incidents of malfunction, with impact on emissions, duration of event, probable cause and corrective actions; and
  - b) maintenance activities, with inspection schedule, repair actions and replacements
- 3) The permittee shall check the cleaning sequences at least once every six months.

- 4) The permittee shall perform an equipment inspection at least once every six months.
- 5) The permittee shall maintain these records on site for the most recent 60 months.
- 6) The permittee shall immediately make such records available to any Department of Natural Resources personnel upon request.

**Reporting:**

- 1) The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

<b>PERMIT CONDITION 5</b>		
10 CSR 10-6.065(6)(C)1.A Voluntary Limitation(s)		
<b>MORTAR MIXERS</b>		
EIQ Reference #	Emission Unit Description	Manufacturer/ Model #
DC-19	Wet and Dry Mortars Batching and Mixing (#1 Mortar Mixer): 3- "A" vibrating and 2- "A" screw conveyors, auger feeder, 3- "B" vibrating and 2- "B" screw conveyors, 2- weigh hoppers (A & B), C-1 and C-2 vibrating conveyors, bag dump station, skip hoist with tilt hopper, surge hopper and mixer; MHDR = 6.0 tons/hr; Installed 1968	Lancaster
DC-20	Wet and Dry Mortars Batching And Mixing (#2 Mortar Mixer): Smith #2 dry mixer, skip hoist, blended bin and sacker; MHDR = 6.0 tons/hr; Installed 1970	T.L. Smith

**Operational Limitation:**

The permittee shall limit chromium compounds used in refractory mortars mixes to 36,792 tons in any consecutive 12-month period expressed as chromic oxide equivalents (Cr<sub>2</sub>O<sub>3</sub>).

**Monitoring/Recordkeeping:**

- 1) The permittee shall maintain an accurate record of chromic oxide equivalents used in refractory mortars mixes from this installation. The permittee shall record the monthly chromic oxide equivalents used with a consecutive 12-month total. The permittee shall use Attachments D1 and E or an equivalent forms for this purpose.
- 2) The permittee shall maintain these records on site for the most recent 60 months.
- 3) The permittee shall immediately make such records available to any Department of Natural Resources personnel upon request.

**Reporting:**

- 1) The permittee shall report to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month, if the consecutive 12-month total records show that the source exceeded the limitation of 36,800 tons of chromium compounds used in refractory mortars mixes.
- 2) The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the semi-annual monitoring report and annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

<b>PERMIT CONDITION 6</b> 10 CSR 10-6.065(6)(C)1.A Voluntary Limitation(s)		
<b>REFRACTORY PLASTICS MIXER</b>		
EIQ Reference #	Emission Unit Description	Manufacturer/ Model #
DC-21	Plastics Batching and Mixing; MHDR = 8.00 ton/hr; Installed 1966	Clearfield mixer #99C

**Operational Limitations:**

The permittee shall limit chromium compounds used in refractory plastics mixes to 24,500 tons in any consecutive 12-month period expressed as chromic oxide equivalents (Cr<sub>2</sub>O<sub>3</sub>).

**Monitoring/Recordkeeping:**

- 1) The permittee shall maintain an accurate record of chromic oxide equivalents used in refractory plastics mixes from this installation. The permittee shall record the monthly chromic oxide equivalents used with a consecutive 12-month total. The permittee shall use Attachments D1 and E or an equivalent forms for this purpose.
- 2) The permittee shall maintain these records on site for the most recent 60 months.
- 3) The permittee shall immediately make such records available to any Department of Natural Resources personnel upon request.

**Reporting:**

- 1) The permittee shall report to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month, if the consecutive 12-month total records show that the source exceeded the limitation of 24,500 tons of chromium compounds used in refractory plastics mixes.
- 2) The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the semi-annual monitoring report and annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

<b>PERMIT CONDITION 7</b> 10 CSR 10-6.065(6)(C)1.A Voluntary Limitation(s)	
EIQ Reference #	Emission Unit Description
DC-27	Tote Can Sack Breaking; MHDR = 3.00 ton/hr; Unknown installation date
DC-28	Tote Can Bulk Bag; MHDR = 6.00 ton/hr; Unknown installation date

**Operational Limitations:**

The permittee shall limit chromium compounds used at bag breaking to 78,800 tons in any consecutive 12-month period expressed as chromic oxide equivalents (Cr<sub>2</sub>O<sub>3</sub>).

**Monitoring/Recordkeeping:**

- 1) The permittee shall maintain an accurate record of chromic oxide equivalents handled at bag breaking from this installation. The permittee shall record the monthly chromic oxide equivalents

handled with a consecutive 12-month total. The permittee shall use Attachments D1 and E or an equivalent forms for this purpose.

- 2) The permittee shall maintain these records on site for the most recent 60 months.
- 3) The permittee shall immediately make such records available to any Department of Natural Resources personnel upon request.

**Reporting:**

- 1) The permittee shall report to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month, if the consecutive 12-month total records show that the source exceeded the limitation of 78,800 tons of chromium compounds used at bag breaking.
- 2) The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the semi-annual monitoring report and annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

<b>PERMIT CONDITION 8</b>		
10 CSR 10-6.065(6)(C)1.A Voluntary Limitation(s)		
<b>BATCHING</b>		
EIQ Reference #	Emission Unit Description	Manufacturer/ Model #
DC-30	Weigh Scales #5 - #8; Maximum Hourly Design Rate = 2.5 ton/hr; Unknown installation date	Unknown
DC-36	Weigh Scales #1 - #4; Maximum Hourly Design Rate = 6.00 ton/hr; Installed 1980	Unknown
DC-44	Automated Batching 10 Station; Maximum Hourly Design Rate = 30.00 ton/hr; Installed 1997	Peabody 10 Position Automatic Batching

**Operational Limitations:**

The permittee shall limit chromium compounds used at batching stations for refractory shapes to 128,772 tons in any consecutive 12-month period expressed as chromic oxide equivalents (Cr<sub>2</sub>O<sub>3</sub>).

**Monitoring/Recordkeeping:**

- 1) The permittee shall maintain an accurate record of chromic oxide equivalents batched for all refractory shapes mixers from this installation. The permittee shall record the monthly chromic oxide equivalents batched with a consecutive 12-month total. The permittee shall use Attachments D1 and E or an equivalent forms for this purpose.
- 2) The permittee shall maintain these records on site for the most recent 60 months.
- 3) The permittee shall immediately make such records available to any Department of Natural Resources personnel upon request.

**Reporting:**

- 1) The permittee shall report to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month, if the consecutive 12-month total records show that the source exceeded the limitation of 128,800 tons of chromium compounds used at batching stations for refractory shapes.

- 2) The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the semi-annual monitoring report and annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

<b>PERMIT CONDITION 9</b>	
10 CSR 10-6.060 <i>Construction Permits Required</i>	
Construction Permit Number 1296-009, Issued November 12, 1996	
EQ Reference #	Emission Unit Description
DC-38	Ball Milling and Screening: Belt conveyor, ball mill, elevator and screen; Maximum Hourly Design Rate = 3.0 ton/hr; Installed 1996

**Operational Standard:**

- 1) The permittee shall operate baghouse DC-38 at all times when the associated processes are in operation. The dust collectors shall be operated and maintained in accordance with the manufacturer's specifications.
- 2) The baghouse shall be equipped with a gauge or meter which indicates the pressure drop across the dust collectors. This gauge or meter shall be located such that it may be easily observed by the Department of Natural Resources' employees.
- 3) The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
  - a) DC-38 shall maintain a pressure drop in the range of 1-6 in w.c.
- 4) The permittee shall keep replacement bags for the baghouse on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance).

**Monitoring/Recordkeeping:**

- 1) The permittee shall monitor and record the operating pressure drop across the baghouse at least once every twenty-four hours using Attachment G, or an equivalent form for this purpose.
- 2) The permittee shall maintain an operating and maintenance log (Attachment C, or equivalent) for the baghouse which shall include the following:
  - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause and corrective actions; and
  - b) Maintenance activities, with inspection schedule, repair actions and replacements.
- 3) The permittee shall check the cleaning sequences at least once every six months.
- 4) The permittee shall perform an equipment inspection at least once every six months.
- 5) The permittee shall maintain these records on site for the most recent 60 months.
- 6) The permittee shall immediately make such records available to any Department of Natural Resources personnel upon request.

**Reporting:**

- 1) The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

<b>PERMIT CONDITION 10</b>		
10 CSR 10-6.060 <i>Construction Permits Required</i>		
Construction Permit Number 082000-008, Issued July 28, 2000		
<b>MONOLITHS PROCESS</b>		
EIQ Reference #	Emission Unit Description	Manufacturer/ Model #
DC-55B	Monoliths Process: Tote Can Fill Station; MHDR = 3.0 ton/hr; Installed 2000	Ducan High Efficiency Single Cyclone
DC-56	Monoliths: Ribbon Mixer and Sacking; MHDR = 14.0 ton/hr; Installed 2000	Torit Model DFT 3-6 Downflo II Cartridge
DC-57	Monoliths: Belt Conveyor and Feed Hopper; MHDR = 14.0 ton/hr; Installed 2000	
DC-58	Monoliths: Bagger; MHDR = 14.0 ton/hr; Installed 2000	
DC-59	Monoliths: Storage Bin; MHDR = 30.0 ton/hr; Installed 2000	Bin Vent
DC-60	Monoliths: Storage Bin; MHDR = 30.0 ton/hr; Installed 2000	Bin Vent

**Operational Requirements:**

- 1) The permittee shall operate the dust collectors associated with the tote can fill (DC-55B), lift & dump transfer (DC-56), ribbon mixer (DC-57A), hopper (DC-57B), belt conveyor (DC-57C) and sacker (DC-58) at all times when the associated processes are in operation. The dust collectors shall be operated and maintained in accordance with the manufacturer's specifications.
- 2) The dust collectors shall be equipped with a gauge or meter which indicates the pressure drop across the dust collectors. This gauge or meter shall be located such that it may be easily observed by the Department of Natural Resources' employees.
- 3) The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
  - a) DC-55 shall maintain a pressure drop in the range of 3-10 in w.c.
  - b) DC-56 through DC-60 shall maintain a pressure drop in the range of 1-6 in w.c.
- 4) Replacement bags for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance).

**Monitoring/Recordkeeping:**

- 1) The permittee shall monitor and record the operating pressure drop across the baghouses at least once every twenty-four hours using Attachment G, or an equivalent form for this purpose.
- 2) The permittee shall maintain an operating and maintenance log (Attachment C, or equivalent) for the baghouses which shall include the following:
  - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause and corrective actions; and
  - b) Maintenance activities, with inspection schedule, repair actions and replacements.
- 3) The permittee shall check the cleaning sequences at least once every six months.
- 4) The permittee shall perform an equipment inspection at least once every six months.
- 5) The permittee shall maintain these records on site for the most recent 60 months.
- 6) The permittee shall immediately make such records available to any Department of Natural Resources personnel upon request.

**Reporting:**

- 1) The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

<b>PERMIT CONDITION 11</b>		
10 CSR 10-6.060 <i>Construction Permits Required</i> Construction Permit Number 0699-029, Issued May 24, 1999		
<b>SILICA REFRACTORIES MATERIALS PROCESS: VISIL MIXING/WEIGHING</b>		
EQ Reference #	Emission Unit Description	Manufacturer/Model #
DC-53	Bag breaker, minor additives stations, weigh hopper, belt conveyor and visil mixer; Maximum Hourly Design Rate (MHDR) = 6.00 tons/hr; Installed 1999	Eirich Mixer/DE-22

**Operational Requirements:**

- 1) The permittee shall operate baghouse DC-53 at all times when the associated processes are in operation. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications.
- 2) The baghouse shall be equipped with a gauge or meter which indicates the pressure drop across the baghouse. This gauge or meter shall be located such that it may be easily observed by the Department of Natural Resources' employees.
- 3) The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
  - a) DC-53 shall maintain a pressure drop in the range of 1-6 in w.c.
- 4) Replacement bags for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance).

**Monitoring/Recordkeeping:**

- 1) The permittee shall monitor and record the operating pressure drop across the baghouse at least once every twenty-four hours using Attachment G, or an equivalent form for this purpose.
- 2) The permittee shall maintain an operating and maintenance log (Attachment C, or equivalent) for the baghouse which shall include the following:
  - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause and corrective actions; and
  - b) Maintenance activities, with inspection schedule, repair actions and replacements.
- 3) The permittee shall check the cleaning sequences at least once every six months.
- 4) The permittee shall perform an equipment inspection at least once every six months.
- 5) The permittee shall maintain these records on site for the most recent 60 months.
- 6) The permittee shall immediately make such records available to any Department of Natural Resources personnel upon request.

**Reporting:**

- 1) The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program

Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

<b>PERMIT CONDITION 12</b> 10 CSR 10-6.060 <i>Construction Permits Required</i> Construction Permit Number 032001-008, Issued January 23, 2001	
EQ Reference #	Emission Unit Description
DC-61	2- Belt conveyors and bucket elevator; Maximum Hourly Design Rate = 50.00 tons/hr; Installed 2001

**Operational Requirements:**

- 1) The permittee shall operate baghouse DC-61 at all times when the associated processes are in operation. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications.
- 2) The baghouse shall be equipped with a gauge or meter which indicates the pressure drop across the baghouse. This gauge or meter shall be located such that it may be easily observed by the Department of Natural Resources' employees.
- 3) The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
  - a) DC-61 shall maintain a pressure drop in the range of 1-6 in w.c.
- 4) Replacement bags for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance).

**Monitoring/Recordkeeping:**

- 1) The permittee shall monitor and record the operating pressure drop across the baghouse at least once every twenty-four hours using Attachment G, or an equivalent form for this purpose.
- 2) The permittee shall maintain an operating and maintenance log (Attachment C, or equivalent) for the baghouse which shall include the following:
  - a) incidents of malfunction, with impact on emissions, duration of event, probable cause and corrective actions; and
  - b) maintenance activities, with inspection schedule, repair actions and replacements
- 3) The permittee shall check the cleaning sequences at least once every six months.
- 4) The permittee shall perform an equipment inspection at least once every six months.
- 5) The permittee shall maintain these records on site for the most recent 60 months.
- 6) The permittee shall immediately make such records available to any Department of Natural Resources personnel upon request.

**Reporting:**

The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).

<b>PERMIT CONDITION 13</b>		
10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants		
EIQ Reference #	Description of Emission Unit	Source Type
B	#2 Tunnel Kiln	Existing
C	#3 Tunnel Kiln	Existing
D	#4 Tunnel Kiln	Existing
E	#5 Bell Kiln	New
K	Bickley Bell Kiln	Existing
Q	Lab Test Kiln	Existing
H	#3 Tunnel Kiln Double Dryer	Existing
M	South Tunnel Dryer	Existing
O	East Chemical Bond Dryer	Existing
R	Sec. 41 Shipping Dryer	Existing
DC-19	Wet and Dry Mortars Batching and Mixing (#1 Mortar Mixer)	Existing
DC-20	Wet and Dry Mortars Batching And Mixing (#2 Mortar Mixer)	Existing
DC-21	Plastics Batching and Mixing	Existing
F	East Pallet Dryer	New
L	Rotary Dryer	New
N-1	Tunnel Dryer (Compartment 1 of 2)	New
N-2	Tunnel Dryer (Compartment 2 of 2)	New
P	West Chemical Bond Dryer	New
S	Bickley Shuttle Kiln	New
DC-01	Semco Material Unloading System	New
DC-02	Silo #3 Vent (M & D Ball Clay)	New
DC-03	Silo #4 Vent (Kentucky #6 Dark)	New
DC-04	Silo #1 Vent (Lumnite Cement)	New
DC-05	Silo #2 Vent (Potters Flint)	New
DC-06	Silo #6 Vent (Gleason Ball Clay)	New
DC-07	Silo #5 Vent (A2)	New
DC-08	Silo #7 Vent (A2)	New
DC-09	Nordberg Bauxite System, Dry Pan Process & Plastics Manufacturing	New
DC-10	Milling Process	New
DC-11	Ground Material Bins: Conveying/Milling	New
DC-12	Dried Raw Material Wall Belt System	New
DC-13	T-64 Nordberg Crushing System	New
DC-14	Raw Material Bin System	New
DC-15	North and South Pan Screening/Grinding	New
DC-16	Materials Mixing: #3 Mixer	New
DC-17	Materials Mixing: #4 Mixer	New
DC-18	Materials Mixing: #5 Mixer	New
DC-22	D-1 Bin Vent (Kyanite 100 mesh)	New

EQ Reference #	Description of Emission Unit	Source Type
DC-23	D-1 A-2 Bin Vent	New
DC-24	D-3 M&D Bin Vent	New
DC-25	A-4 A-2 Bin Vent	New
DC-26	A-5 Kentucky #6 Dark Bin Vent	New
DC-27	Tote Can Sack Breaking	New
DC-28	Tote Can Bulk Bag	New
DC-30	Weigh Scales #5 - #8	New
DC-36	Weigh Scales #1 - #4	New
DC-38	Ball Milling and Screening	New
DC-29	S.G. Screening – Transfer/Crushing/Screening	New
DC-31	S.G. Bin Vent (T-61)	New
DC-32	S.G. Bin Vent 2 (T-61)	New
DC-33	Taphole Mixing/Weighing	New
DC-34	Mold Making Wood Shop	New
DC-35	A-4 Fillite Mix Bin	New
DC-39	HB 50 Ton Bin	New
DC-40	A-5 Gleason Bin	New
DC-41	East Kiln Car Vacuum System	New
DC-42	Shipping Grinding Room	New
DC-43	West Kiln Car Vacuum System	New
DC-44	Automated Batching 10 Station	New
DC-45	Barmac Crushing and Screening System: Crushing/Screening/Conveying	New
DC-46	#1 Mixer Eirich DE-22	New
DC-47	#2 Mixer Eirich DE-22	New
DC-48	#3 Mixer Eirich DEV-22	New
DC-49	#4 Mixer Eirich DEV-22	New
DC-50	#5 Mixer Eirich DEV-22	New
DC-51	#6 Mixer Eirich DE-22	New
DC-52	#7 Mixer Eirich DE-18	New
DC-53	Silica Refractories Materials Process: Visil Mixing/Weighing	New
DC-54	Monoliths: Zirconia Mixer	New
DC-55B	Monoliths Process: Tote Can Fill Station	New
DC-56	Monoliths Process: Ribbon Mixer and Sacking	New
DC-57	Monoliths: Belt Conveyor and Feed Hopper	New
DC-58	Monoliths: Bagger	New
DC-59	Monoliths: Storage Bin	New
DC-60	Monoliths: Storage Bin	New
DC-61	Barmac Crusher Feed Conveying System	New
<ul style="list-style-type: none"> <li>• <i>New source</i>: any equipment, machine, device, article, contrivance or installation installed in the outstate Missouri area after February 24, 1971.</li> </ul>		

EIQ Reference #	Description of Emission Unit	Source Type
<ul style="list-style-type: none"> <li>The column titled "Source Type" lists the source classification (<i>new/existing</i>) under the rule. The source classification determines the applicable opacity limit under 10 CSR 10-6.220 in the condition text below.</li> </ul>		

**Emission Limitation:**

- 1) The permittee shall not cause or permit emissions to be discharged into the atmosphere from any **existing** source any visible emissions with an opacity greater than 40%.
- 2) The permittee shall not cause or permit emissions to be discharged into the atmosphere from any **new** source any visible emissions with an opacity greater than 20%.
- 3) Exception: the permittee may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60%.

**Monitoring, Recordkeeping and Reporting:**

The monitoring, recordkeeping and reporting requirements for this condition are placed under the 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants heading in the Core Permit Requirements Section (Section IV) of this permit.

<b>PERMIT CONDITION 14</b> 10 CSR 10-6.060 <i>Construction Permits Required</i> Construction Permit Number 052015-013, Issued May 22, 2015		
<b>MONOLITHS PROCESS</b>		
EIQ Reference #	Emission Unit Description	Manufacturer/ Model #
DC-54	Monoliths Process: Rollo Mixer; MHDR = 6.0 ton/hr; Installed 2000, Restarted 2015	Ultra #BB-36-84-IIG

**Operational Requirements:**

- 1) The permittee shall control emissions from the Monoliths Rollo Mixer using a baghouse as specified in the permit application. [Special Condition 1.A.]
- 2) The baghouse shall be operated and maintained in accordance with the manufacturer's specifications. [Special Condition 1.B.]
- 3) The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. The gauge or meter shall be located such that Department of Natural Resources' employees may easily observe them. [Special Condition 1.B.]
- 4) Replacement filters for the baghouse shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance). [Special Condition 1.C.]
- 5) The permittee shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours. The operating pressure drop shall be maintained within 1 to 6 inches water column. [Special Condition 1.D.]

**Monitoring/Recordkeeping:**

- 1) The permittee shall monitor and record the operating pressure drop across the baghouses at least once every twenty-four hours using Attachment G, or an equivalent form for this purpose.

- 2) The permittee shall maintain an operating and maintenance log (Attachment C, or equivalent) for the baghouses which shall include the following: [Special Condition 1.E.]
  - a) Incidents of malfunction, with impact on emissions, duration of event, probable cause and corrective actions; and
  - b) Maintenance activities, with inspection schedule, repair actions and replacements.
- 3) The permittee shall check the cleaning sequences at least once every six months.
- 4) The permittee shall perform an equipment inspection at least once every six months.
- 5) The permittee shall maintain all records required by this permit condition for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [Special Condition 2.A.]

**Reporting:**

- 1) The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by 10 CSR 10-6.065(6)(C)1.C.(III).
- 2) The permittee 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 condition show an exceedance of a limitation imposed by this permit condition. [Special Condition 2.B.]

## IV. Core Permit Requirements

The installation shall comply with each of the following regulations or codes. Consult the appropriate sections in the Code of Federal Regulations (CFR), the Code of State Regulations (CSR), and local ordinances for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued. The following is only an excerpt from the regulation or code, and is provided for summary purposes only.

### **10 CSR 10-6.045 Open Burning Requirements**

- 1) General Provisions. The open burning of tires, petroleum-based products, asbestos containing materials, and trade waste is prohibited, except as allowed below. Nothing in this rule may be construed as to allow open burning which causes or constitutes a public health hazard, nuisance, a hazard to vehicular or air traffic, nor which violates any other rule or statute.
- 2) Certain types of materials may be open burned provided an open burning permit is obtained from the director. The permit will specify the conditions and provisions of all open burning. The permit may be revoked if the owner or operator fails to comply with the conditions or any provisions of the permit.

### **10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions**

- 1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days, in writing, the following information:
  - a) Name and location of installation;
  - b) Name and telephone number of person responsible for the installation;
  - c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
  - d) Identity of the equipment causing the excess emissions;
  - e) Time and duration of the period of excess emissions;
  - f) Cause of the excess emissions;
  - g) Air pollutants involved;
  - h) Estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
  - i) Measures taken to mitigate the extent and duration of the excess emissions; and
  - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- 2) The permittee shall submit the paragraph 1 information to the director in writing at least ten days prior to any maintenance, start-up or shutdown activity which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, notice shall be given as soon as practicable prior to the activity.
- 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.

- 4) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
- 5) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

#### **10 CSR 10-6.060 Construction Permits Required**

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

#### **10 CSR 10-6.065 Operating Permits**

The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than eighteen months. The permittee shall retain the most current operating permit issued to this installation on-site. The permittee shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request.

#### **10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants and 40 CFR Part 61 Subpart M National Emission Standard for Asbestos**

The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.

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

- 1) The permittee shall submit a Full Emissions Report either electronically via MoEIS, which requires Form 1.0 signed by an authorized company representative, or on Emission Inventory Questionnaire (EIQ) paper forms on the frequency specified in this rule and in accordance with the requirements outlined in this rule. Alternate methods of reporting the emissions, such as spreadsheet file, can be submitted for approval by the director.
- 2) Public Availability of Emission Data and Process Information. Any information obtained pursuant to the rule(s) of the Missouri Air Conservation Commission that would not be entitled to confidential treatment under 10 CSR 10-6.210 shall be made available to any member of the public upon request.
- 3) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079.

#### **10 CSR 10-6.130 Controlling Emissions During Episodes of High Air Pollution Potential**

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

#### **10 CSR 10-6.150 Circumvention**

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

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

**This is a State Only permit requirement.**

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour. This odor evaluation shall be taken at a location outside of the installation's property boundary.

**10 CSR 10-6.170**

**Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin**

**Emission Limitation:**

- 1) The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.
- 2) The permittee shall not cause nor allow to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.
- 3) Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
  - a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
  - b) Paving or frequent cleaning of roads, driveways and parking lots;
  - c) Application of dust-free surfaces;
  - d) Application of water; and
  - e) Planting and maintenance of vegetative ground cover.

**Monitoring:**

The permittee shall conduct inspections of its facilities sufficient to determine compliance with this regulation. If the permittee discovers a violation, the permittee shall undertake corrective action to eliminate the violation.

The permittee shall maintain the following monitoring schedule:

- 1) The permittee shall conduct weekly observations for a minimum of eight (8) consecutive weeks after permit issuance.
- 2) Should no violation of this regulation be observed during this period then-
  - a) The permittee may observe once every two (2) weeks for a period of eight (8) weeks.
  - b) If a violation is noted, monitoring reverts to weekly.
  - c) Should no violation of this regulation be observed during this period then-
    - i) The permittee may observe once per month.
    - ii) If a violation is noted, monitoring reverts to weekly.
- 3) If the permittee reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner to the initial monitoring frequency.

**Recordkeeping:**

The permittee shall document all readings on Attachment A, or its equivalent, noting the following:

- 1) Whether air emissions (except water vapor) remain visible in the ambient air beyond the property line of origin.
- 2) Whether equipment malfunctions contributed to an exceedance.
- 3) Any violations and any corrective actions undertaken to correct the violation.

**10 CSR 10-6.180 Measurement of Emissions of Air Contaminants**

- 1) The director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The director may specify testing methods to be used in accordance with good professional practice. The director may observe the testing. All tests shall be performed by qualified personnel.
- 2) The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
- 3) The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

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

**Emission Limitation:**

The permittee shall not cause or permit to be discharged into the atmosphere from any source not exempted under 10 CSR 10-6.220 any visible emissions in excess of the limits specified by this rule. This permit will contain the opacity limits identified (10, 20 or 40 percent) for the specific emission units.

**Monitoring:**

- 1) The permittee shall conduct opacity readings on each emission unit using the procedures contained in USEPA Test Method 22. The permittee is only required to take readings when the emission unit is operating and when the weather conditions allow. If the permittee observes no visible or other significant emissions using these procedures, then no further observations are required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
- 2) The permittee must maintain the following monitoring schedule:
  - a) The permittee shall conduct weekly observations for a minimum of eight (8) consecutive weeks after permit issuance.
  - b) Should the permittee observe no violations of this regulation during this period then-
    - i) The permittee may observe once every two (2) weeks for a period of eight (8) weeks.
    - ii) If a violation is noted, monitoring reverts to weekly.
    - iii) Should no violation of this regulation be observed during this period then-
      - (1) The permittee may observe once per month.
      - (2) If a violation is noted, monitoring reverts to weekly.
- 3) If the source reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner from the initial monitoring frequency.

**Recordkeeping:**

The permittee shall maintain records of all observation results using Attachment B (or its equivalent), noting:

- 1) Whether any air emissions (except for water vapor) were visible from the emission units;
- 2) All emission units from which visible emissions occurred;
- 3) Whether the visible emissions were normal for the process;
- 4) The permittee shall maintain records of any equipment malfunctions, which may contribute to visible emissions; and,
- 5) The permittee shall maintain records of all USEPA Method 9 opacity tests performed.

**10 CSR 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements**

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees.

**10 CSR 10-6.280 Compliance Monitoring Usage**

- 1) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
  - a) Monitoring methods outlined in 40 CFR Part 64;
  - b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, “Operating Permits”, and incorporated into an operating permit; and
  - c) Any other monitoring methods approved by the director.
- 2) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at an installation:
  - a) Monitoring methods outlined in 40 CFR Part 64;
  - b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, “Operating Permits”, and incorporated into an operating permit; and
  - c) Compliance test methods specified in the rule cited as the authority for the emission limitations.
- 3) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
  - a) Applicable monitoring or testing methods, cited in:
    - i) 10 CSR 10-6.030, “Sampling Methods for Air Pollution Sources”;
    - ii) 10 CSR 10-6.040, “Reference Methods”;
    - iii) 10 CSR 10-6.070, “New Source Performance Standards”;
    - iv) 10 CSR 10-6.080, “Emission Standards for Hazardous Air Pollutants”;
  - b) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.

**40 CFR Part 82 Protection of Stratospheric Ozone (Title VI)**

- 1) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to 40 CFR §82.106.
  - b) The placement of the required warning statement must comply with the requirements of 40 CFR §82.108.
  - c) The form of the label bearing the required warning statement must comply with the requirements of 40 CFR §82.110.
  - d) No person may modify, remove, or interfere with the required warning statement except as described in 40 CFR §82.112.
- 2) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B of 40 CFR Part 82:
  - a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices described in 40 CFR §82.156.
  - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment described in 40 CFR §82.158.
  - c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR §82.161.
  - d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with the record keeping requirements of 40 CFR §82.166. ("MVAC-like" appliance as defined at 40 CFR §82.152).
  - e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR §82.156.
  - f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR §82.166.
- 3) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
- 4) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements contained in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.
- 5) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR Part 82.*

## V. General Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued,

### **10 CSR 10-6.065(6)(C)1.B Permit Duration**

### **10 CSR 10-6.065(6)(E)3.C Extension of Expired Permits**

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed. If a timely and complete application for a permit renewal is submitted, but the Air Pollution Control Program fails to take final action to issue or deny the renewal permit before the end of the term of this permit, this permit shall not expire until the renewal permit is issued or denied.

### **10 CSR 10-6.065(6)(C)1.C General Record Keeping and Reporting Requirements**

- 1) Record Keeping
  - a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
  - b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources' personnel upon request.
- 2) Reporting
  - a) All reports shall be submitted to the Air Pollution Control Program, Compliance and Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
  - b) The permittee shall submit a report of all required monitoring by:
    - i) October 1st for monitoring which covers the January through June time period, and
    - ii) April 1st for monitoring which covers the July through December time period.
  - c) Each report shall identify any deviations from emission limitations, monitoring, record keeping, reporting, or any other requirements of the permit, this includes deviations or Part 64 exceedances.
  - d) Submit supplemental reports as required or as needed. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
    - i) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7.A of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
    - ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.

- iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semiannual report shall be reported on the schedule specified in this permit, and no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.
- e) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.
- f) The permittee may request confidential treatment of information submitted in any report of deviation.

#### **10 CSR 10-6.065(6)(C)1.D Risk Management Plan Under Section 112(r)**

If the installation is required to develop and register a risk management plan pursuant to Section 112(R) of the Act, the permittee will verify that it has complied with the requirement to register the plan.

#### **10 CSR 10-6.065(6)(C)1.F Severability Clause**

In the event of a successful challenge to any part of this permit, all uncontested permit conditions shall continue to be in force. All terms and conditions of this permit remain in effect pending any administrative or judicial challenge to any portion of the permit. If any provision of this permit is invalidated, the permittee shall comply with all other provisions of the permit.

#### **10 CSR 10-6.065(6)(C)1.G General Requirements**

- 1) The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
- 2) The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit
- 3) The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- 4) This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
- 5) The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 10 CSR 10-6.065(6)(C)1.

#### **10 CSR 10-6.065(6)(C)1.H Incentive Programs Not Requiring Permit Revisions**

No permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in this permit.

**10 CSR 10-6.065(6)(C)1.I Reasonably Anticipated Operating Scenarios**

None

**10 CSR 10-6.065(6)(C)3 Compliance Requirements**

- 1) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
- 2) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
  - a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
  - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
  - d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- 3) All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
  - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
  - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, as well as the Air Pollution Control Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and Part 64 exceedances and excursions must be included in the compliance certifications. The compliance certification shall include the following:
  - a) The identification of each term or condition of the permit that is the basis of the certification;
  - b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
  - c) Whether compliance was continuous or intermittent;
  - d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
  - e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

#### **10 CSR 10-6.065(6)(C)6 Permit Shield**

- 1) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date that this permit is issued, provided that:
  - a) The applicable requirements are included and specifically identified in this permit, or
  - b) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation, and this permit expressly includes that determination or a concise summary of it.
- 2) Be aware that there are exceptions to this permit protection. The permit shield does not affect the following:
  - a) The provisions of section 303 of the Act or section 643.090, RSMo concerning emergency orders,
  - b) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance,
  - c) The applicable requirements of the acid rain program,
  - d) The authority of the Environmental Protection Agency and the Air Pollution Control Program of the Missouri Department of Natural Resources to obtain information, or
  - e) Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions.

#### **10 CSR 10-6.065(6)(C)7 Emergency Provisions**

- 1) An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7.A shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
  - a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
  - b) That the installation was being operated properly,
  - c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
  - d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
- 2) Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

#### **10 CSR 10-6.065(6)(C)8 Operational Flexibility**

An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The permittee shall notify the Air Pollution Control Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, at least seven days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an

emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

- 1) Section 502(b)(10) changes. Changes that, under section 502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally enforceable monitoring (including test methods), record keeping, reporting or compliance requirements of the permit.
  - a) Before making a change under this provision, The permittee shall provide advance written notice to the Air Pollution Control Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, describing the changes to be made, the date on which the change will occur, and any changes in emission and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and the APCP shall place a copy with the permit in the public file. Written notice shall be provided to the EPA and the APCP as above at least seven days before the change is to be made. If less than seven days notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to the EPA and the APCP as soon as possible after learning of the need to make the change.
  - b) The permit shield shall not apply to these changes.

#### **10 CSR 10-6.065(6)(C)9 Off-Permit Changes**

- 1) Except as noted below, the permittee may make any change in its permitted operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Insignificant activities listed in the permit, but not otherwise addressed in or prohibited by this permit, shall not be considered to be constrained by this permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:
  - a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is subject to any requirements under Title IV of the Act or is a Title I modification;
  - b) The permittee must provide contemporaneous written notice of the change to the Air Pollution Control Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219. This notice shall not be required for changes that are insignificant activities under 10 CSR 10-6.065(6)(B)3 of this rule. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change.
  - c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and
  - d) The permit shield shall not apply to these changes.

#### **10 CSR 10-6.020(2)(R)12 Responsible Official**

The application utilized in the preparation of this permit was signed by Michael Schalk, Corporate Secretary. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30

days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

#### **10 CSR 10-6.065(6)(E)6 Reopening-Permit for Cause**

This permit may be reopened for cause if:

- 1) The Missouri Department of Natural Resources (MDNR) receives notice from the Environmental Protection Agency (EPA) that a petition for disapproval of a permit pursuant to 40 CFR § 70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
- 2) MDNR or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
- 3) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
  - a) The permit has a remaining term of less than three years;
  - b) The effective date of the requirement is later than the date on which the permit is due to expire;  
or
  - c) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
- 4) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit;  
or
- 5) MDNR or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

#### **10 CSR 10-6.065(6)(E)1.C Statement of Basis**

This permit is accompanied by a statement setting forth the legal and factual basis for the permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

## **VI. Attachments**

Attachments follow.



**ATTACHMENT B**

Method 9 Opacity Emissions Observations	
Company	Observer
Location	Observer Certification Date
Date	Emission Unit
Time	Control Device

Hour	Minute	Seconds				Steam Plume (check if applicable)		Comments
		0	15	30	45	Attached	Detached	
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							

SUMMARY OF AVERAGE OPACITY				
Set Number	Time		Opacity	
	Start	End	Sum	Average

Readings ranged from \_\_\_\_\_ to \_\_\_\_\_ % opacity.

Was the emission unit in compliance at the time of evaluation? YES NO

\_\_\_\_\_  
 Signature of Observer



**ATTACHMENT D1**  
**Monthly Cr<sub>2</sub>O<sub>3</sub> Emissions**

**Month/Year:** \_\_\_\_\_

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Group	Monthly Production (tons)	Chromic Oxide Content (tons)	Cr <sub>2</sub> O <sub>3</sub> Emission Factor (lb/ton)	Overall Control Efficiency	Monthly Cr <sub>2</sub> O <sub>3</sub> Emissions (tons)
<i>Kiln Fired Refractory Shapes</i>			0.000149	0%	
<i>All Shapes Dryers</i>			0.187	0%	
<i>Process Refractory Shapes Mixes</i>			0.6	98%	
<i>Refractory Mortar Mixes</i>			0.6	98%	
<i>Refractory Plastics Mixer</i>			0.6	98% <sup>1</sup>	
<i>Bag Breaking</i>			0.2442569	98% <sup>1</sup>	
<i>Batching Stations</i>			0.6	98% <sup>1</sup>	
				<b>Total</b>	

Column 1: Emission Group as separated below;

Column 2: Total production of all emission units in the group;

Column 3: [Column 2] x 0.35 = [Column 3] (35% of the mixture is Cr<sub>2</sub>O<sub>3</sub>)

Column 4: Emission factors from WebFIRE and the 1996 stack test for the Bag Breaking group;

Column 5: Control percentage based on control unit in place;

Column 6: [Column 3] x [Column 4] x (1-[Column 5]) / 2000 = [Column 6]

<sup>1</sup> Since the control devices for these emission units do not have federally enforceable control device requirements in the permit, an overall control efficiency of 0% will be used if the control devices are not properly maintained or not in use while the emission units are in operation.

Emission Units in each group						
Kiln Fired Refractory Shapes (SCC)	All Shapes Dryers (SCC)	Process Refractory Shapes Mixers (SCC)	Refractory Mortar Mixes (SCC)	Refractory Plastics Mixers (SCC)	Bag Breaking (SCC)	Batching Stations (SCC)
B (30500311)	F (30500350)	46 (30501223)	19 (30501223)	21	27/28	30
C (30500311)	H (30500350)	47 (30501223)	20 (30501223)	(30501223)	(30500612)	(30501223)
D (30500311)	M (30500350)	48 (30501223)				36
E (30500314)	N (30500350)	49 (30501223)				(30501223)
K (30500314)	O (30500350)	50 (30501223)				44
Q (30500314)	P (30500350)	51 (30501223)				(30500612)
S (30500314)	R (30500350)	52 (30501223)				

**ATTACHMENT D2**  
Monthly Cr<sub>2</sub>O<sub>3</sub> Emissions Worksheet

**Month/Year:** Month/Year (Example)

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Group	Monthly Production (tons)	Chromic Oxide Content (tons)	Cr <sub>2</sub> O <sub>3</sub> Emission Factor (lb/ton)	Overall Control Efficiency	Monthly Cr <sub>2</sub> O <sub>3</sub> Emissions (tons)
<i>Kiln Fired Refractory Shapes</i>	9500	3325	0.000149	0%	0.00025
<i>All Shapes Dryers</i>	14700	5145	0.187	0%	0.48
<i>Process Refractory Shapes Mixes</i>	30600	10710	0.6	98%	0.064
<i>Refractory Mortar Mixes</i>	8700	3045	0.6	98%	0.018
<i>Refractory Plastics Mixer</i>	5800	2030	0.6	98% <sup>1</sup>	0.012
<i>Bag Breaking</i>	6500	2275	0.2442569	98% <sup>1</sup>	0.0056
<i>Batching Stations</i>	30600	10710	0.6	98% <sup>1</sup>	0.064
				<b>Total</b>	0.65

Column 1: Emission Group as separated below;

Column 2: Total production of all emission units in the group;

Column 3: [Column 2] x 0.35 = [Column 3]

Column 4: Emission factors from WebFIRE and the 1996 stack test for the Bag Breaking group;

Column 5: Control percentage based on control unit in place;

Column 6: [Column 3] x [Column 4] x (1-[Column 5]) / 2000 = [Column 6]

<sup>1</sup> Since the control devices for these emission units do not have federally enforceable control device requirements in the permit, an overall control efficiency of 0% will be used if the control devices are not properly maintained or not in use while the emission units are in operation.

Emission Units in each group						
Kiln Fired Refractory Shapes (SCC)	All Shapes Dryers (SCC)	Process Refractory Shapes Mixers (SCC)	Refractory Mortar Mixes (SCC)	Refractory Plastics Mixers (SCC)	Bag Breaking (SCC)	Batching Stations (SCC)
B (30500311)	F (30500350)	46 (30501223)	19 (30501223)	21	27/28	30
C (30500311)	H (30500350)	47 (30501223)	20 (30501223)	(30501223)	(30500612)	(30501223)
D (30500311)	M (30500350)	48 (30501223)				36
E (30500314)	N (30500350)	49 (30501223)				(30501223)
K (30500314)	O (30500350)	50 (30501223)				44
Q (30500314)	P (30500350)	51 (30501223)				(30500612)
S (30500314)	R (30500350)	52 (30501223)				

**ATTACHMENT E**  
**Cr<sub>2</sub>O<sub>3</sub> 12-Month Usage Rolling Total Compliance Worksheet**

This sheet covers the period from \_\_\_\_\_ to \_\_\_\_\_

Month/ Year	Kiln Fired Refractory Shapes		All Shapes Dryers		Process Refractory Shapes Mixes		Refractory Mortar Mixes		Refractory Plastics Mixer		Bag Breaking		Batching Stations	
	Monthly Chromic Oxide <sup>1</sup>	12-Month Rolling Total <sup>2</sup>	Monthly Chromic Oxide <sup>1</sup>	12-Month Rolling Total <sup>2</sup>	Monthly Chromic Oxide <sup>1</sup>	12-Month Rolling Total <sup>2</sup>	Monthly Chromic Oxide <sup>1</sup>	12-Month Rolling Total <sup>2</sup>	Monthly Chromic Oxide <sup>1</sup>	12-Month Rolling Total <sup>2</sup>	Monthly Chromic Oxide <sup>1</sup>	12-Month Rolling Total <sup>2</sup>	Monthly Chromic Oxide <sup>1</sup>	12-Month Rolling Total <sup>2</sup>
<i>Month/ Year</i>	0	< 39,907	0	< 61,800	0	< 128,800	0	< 36,800	0	< 24,500	0	< 78,800	0	< 128,800

<sup>1</sup> Value taken from corresponding Month/Year Attachment D1 Column 3

<sup>2</sup> [Current month Chromic Oxide content] + [Previous 11 months Chromic Oxide content] = [12-Month rolling total]

Group	12-Month Rolling Total Compliance Values (tons)
Kiln Fired Refractory Shapes	39,907
All Shapes Dryers	61,800
Process Refractory Shapes Mixes	128,800
Refractory Mortar Mixes	36,800
Refractory Plastics Mixes	24,500
Bag Breaking	78,800
Batching Stations	128,800





## STATEMENT OF BASIS

### Installation Description

The installation manufactures predominantly high percentage alumina and minor quantities of silica refractory shapes and specialty products such as refractory plastics, mortars and taphole ramming mixes. A wide variety of conveying, drying, milling, mixing, shaping equipment and firing kilns are used in the process. The installation has the potential to emit major levels of Volatile Organic Compounds (VOC), Particulate Matter less than or equal to 10 microns (PM<sub>10</sub>), and Particulate Matter less than or equal to 25 microns (PM<sub>2.5</sub>). The facility has taken a voluntary condition to limit emission of Hazardous Air Pollutants (HAPs) to less than major levels.

The installation is not on the list of named installations and therefore fugitive emissions are not counted towards major source applicability.

### Potential to Emit for the Installation

Pollutant	Potential to Emit (tons/yr) <sup>1</sup>
CO	97.08
CO <sub>2e</sub>	95,598
HAP	21.40
NO <sub>x</sub>	47.41
PM <sub>10</sub>	616.14
PM <sub>25</sub>	165.78
SO <sub>x</sub>	33.89
VOC	100.71
Both PM <sub>10</sub> and PM <sub>2.5</sub> PTE include emissions from fugitive sources. Not counting fugitive emissions, the PTE for PM <sub>10</sub> is 116.75 tpy.	
Since there are a lack of published PM <sub>2.5</sub> emission factors for this source, the PTE used EF's submitted in the 2012 EIQ.	

<sup>1</sup>Each emission unit was evaluated at 8,760 hours of uncontrolled annual operation unless otherwise noted.

### Reported Air Pollution Emissions, Tons per Year

Pollutants	2015	2014	2013	2012	2011
Particulate Matter ≤ Ten Microns (PM <sub>10</sub> )	14.56	15.90	9.22	13.80	16.94
Particulate Matter ≤ 2.5 Microns (PM <sub>2.5</sub> )	10.20	11.21	6.30	9.56	11.84
Sulfur Oxides (SO <sub>x</sub> )	12.35	13.93	6.38	9.23	11.74
Nitrogen Oxides (NO <sub>x</sub> )	7.90	8.45	4.73	5.34	6.55
Volatile Organic Compounds(VOC)	0.68	1.50	0.48	0.36	0.63
Carbon Monoxide (CO)	19.53	21.48	9.54	13.34	16.77
Lead (Pb)	0.00	0.00	0.00	0.00	0.00
Hazardous Air Pollutants (HAPs) Total	1.40	1.87	1.85	1.82	1.83
Hydrogen Fluoride	0.875	0.875	0.574	0.574	0.574
Hydrogen Chloride	0.402	0.402	1.25	1.25	1.25
Chromium Compounds	0.948	0.948	0.066	0.003	0.003
Ammonia (NH <sub>3</sub> )	0.01	0.01	0.00	0.00	0.00

### Permit Reference Documents

These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

1. Part 70 Operating Permit Application, received November 7, 2011;
2. 2011 - 2015 Emissions Inventory Questionnaires;
3. U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition;
4. Construction Permit Number 1296-009, issued November 12, 1996;
5. Construction Permit Number 0199-015, issued December 30, 1998;
6. Construction Permit Number 0699-029, issued May 24, 1999;
7. Construction Permit Number 052015-013, Issued May 22, 2015;
8. Construction Permit Number 082000-008, issued July 28, 2000; and
9. Construction Permit Number 032001-007, issued January 23, 2001.

**Applicable Requirements Included in the Operating Permit but Not in the Application or Previous Operating Permits**

In the operating permit application, the installation indicated they were not subject to the following regulation(s). However, in the review of the application, the agency has determined that the installation is subject to the following regulation(s) for the reasons stated.

**Other Air Regulations Determined Not to Apply to the Operating Permit**

The Air Pollution Control Program (APCP) has determined the following requirements to not be applicable to this installation at this time for the reasons stated.

10 CSR 10-6.100, *Alternate Emission Limits*

This rule is not applicable because the installation is in an ozone attainment area.

**Construction Permit History**

Permit No.	Project Description	Construction Permit Location in Operating Permit
0581-014	Shuttle Kiln	
0678-002	Addition of Grinding, crushing and screening operations	Construction Permit contained no Special Conditions
0581-014A	New shuttle kiln	Special Condition is obsolete (see below)
1296-009	Specialties ball mill line	Permit Condition 9
0199-015	Installation of additional grinding, screening, and mixing systems.	Permit Condition 4
0699-029	Installation of a new shuttle kilns	Permit Condition 11
082000-008	Installation of a blending-station, transfer-station, mixer, hopper, conveyors, and bulk bag filling stations.	Permit Condition 10
032001-007	Modify crushing system	Permit Condition 12
052015-013	Restart Monoliths: Rollo Mixer (DC-54)	Permit Condition 14

Construction Permit 0581-014A:

The permit contains only one special condition: "The production rate in tons of finished material per year after the new shuttle kiln installation is complete shall not be increased beyond the existing production rate at the time of this permit's issuance."

### **New Source Performance Standards (NSPS) Applicability**

40 CFR Part 60, Subpart LL - *Standards of Performance for Metallic Mineral Processing Plants.*

This rule is not applicable as Subpart LL is based on a process increasing the concentration of metallic minerals from the original concentrations put into the system. No concentration of any metallic minerals from ore occurs at this installation, therefore does not apply to any sources at this facility.

40 CFR Part 60 Subpart OOO - *Standards of Performance for Nonmetallic Mineral Processing Plants.*

This rule is not applicable as the majority of materials processed at this installation are bauxite and other high alumina materials.

### **Maximum Achievable Control Technology (MACT) Applicability**

The facility is not a major source of HAP (See Potential to Emit table below), and there are no applicable area source MACT applicability issues.

### **Compliance Assurance Monitoring (CAM) Applicability**

40 CFR Part 64, *Compliance Assurance Monitoring (CAM)*

The CAM rule applies to each pollutant specific emission unit that:

- Is subject to an emission limitation or standard, and
- Uses a control device to achieve compliance, and
- Has pre-control emissions that exceed or are equivalent to the major source threshold.

40 CFR Part 64 is not applicable because none of the pollutant-specific emission units uses a control device to achieve compliance with a relevant standard.

### **Greenhouse Gas Emissions**

This installation is not a major source for greenhouse gases. While Part 70 Permits generally do not establish new emission limits, they consolidate applicable requirements, as defined in Missouri State Regulations 10 CSR 10-6.020 (2)(A)23, into a comprehensive air permit. This source is subject to 40 CFR Part 98 - *Mandatory Greenhouse Gas Reporting Rule*. However, the preamble of the GHG Reporting Rule clarifies that Part 98 requirements do not have to be incorporated in Part 70 permits operating permits at this time. In addition, Missouri regulations do not require the installation to report CO<sub>2</sub> emissions in their Missouri Emissions Inventory Questionnaire; therefore, the installation's actual CO<sub>2</sub> emissions were not included within this permit. The applicant is required to report actual CO<sub>2</sub> emissions data directly to EPA.

### **Other Regulatory Determinations**

The following tables illustrate the facility is an area source of HAP through voluntary usage limitations. Although voluntary, the usage limitations are federally enforceable through 10 CSR 10-6.065(2)(C) and 10 CSR 10-6.065(5)(A). Compliance with the limits will be demonstrated through documented material usage.

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The permittee shall limit the raw clay used in fired refractory shapes to 45,610 tons in any consecutive 12-month period to control hydrogen fluoride and hydrogen chloride emissions. (*See Permit Condition 1*)

EQ Ref.#	Description	MHDR (ton/hr)	Production tons/yr (@8760 hours)	Raw Clay Addition (40%) (tpy)	Emission Factor <sup>1</sup>	PTE
B	#2 Tunnel Kiln	4.75	41610.00	16644.00	0.37	3.08
C	#3 Tunnel Kiln	3.6	31536.00	12614.40	0.37	2.33
D	#4 Tunnel Kiln	3.6	31536.00	12614.40	0.37	2.33
E	Bell kiln, NG fired periodic kiln	0.016	140.16	56.06	0.37	0.01
K	Bickley Bell Kiln	0.08	700.80	280.32	0.37	0.05
Q	Lab Test Kiln	0.05	438.00	175.20	0.37	0.03
S	Bickley Shuttle Kiln	0.92	8059.20	3223.68	0.37	0.60
<b>Total Raw Clay Addition</b>				<b>45,608</b>	<b>HF (tpy)</b>	<b>8.44</b>
B	#2 Tunnel Kiln	4.75	41610.00	16644.00	0.17	1.41
C	#3 Tunnel Kiln	3.6	31536.00	12614.40	0.17	1.07
D	#4 Tunnel Kiln	3.6	31536.00	12614.40	0.17	1.07
E	Bell kiln, NG fired periodic kiln	0.016	140.16	56.06	0.17	0.00
K	Bickley Bell Kiln	0.08	700.80	280.32	0.17	0.02
Q	Lab Test Kiln	0.05	438.00	175.20	0.17	0.01
S	Bickley Shuttle Kiln	0.92	8059.20	3223.68	0.17	0.27
<b>Total Raw Clay Addition</b>				<b>45,608</b>	<b>HCL (tpy)</b>	<b>3.88</b>

<sup>1</sup>Emission Factors from WebFIRE for SCC 30500311 (Gas-fired Tunnel Kilns). There were no applicable emission factors for SCC 30500314 (Gas-fired Periodic Kilns). Emission factors from SCC 30500311 were used as a worst case scenario. Evaluated at 8760 hours/year.

The permittee shall limit chromium compounds used in kiln fired refractory shapes for all kilns to 40,000 tons in any consecutive 12-month period expressed as chromic oxide (Cr<sub>2</sub>O<sub>3</sub>). (See Permit Condition 1)

EQ Ref.#	EU#/Associated Equipment	MHDR (ton/hr)	Production tons/yr	Chromic oxide (35%)	Emission Factor <sup>1</sup> (lb/ton)	PTE (tons/yr)
B	#2 Tunnel Kiln	4.75	41,610	14,563.50	1.49x10 <sup>-4</sup>	0.00
C	#3 Tunnel Kiln	3.6	31,536	11,037.60	1.49x10 <sup>-4</sup>	0.00
D	#4 Tunnel Kiln	3.6	31,536	11,037.60	1.49x10 <sup>-4</sup>	0.00
E	Bell kiln	0.016	140	49.06	1.49x10 <sup>-4</sup>	0.00
K	Bickley Bell Kiln	0.08	701	245.28	1.49x10 <sup>-4</sup>	0.00
Q	Lab Test Kiln	0.05	438	153.30	1.49x10 <sup>-4</sup>	0.00
S	Bickley Shuttle Kiln	0.92	8,059	2,820.72	1.49x10 <sup>-4</sup>	0.00
<b><sup>1</sup>Emission Factor Source:</b> FIRE Chromium Emission factor (SCC 30500311) and up-scaled stoichiometrically to Cr <sub>2</sub> O <sub>3</sub> (0.000051 lb Cr /ton x 152/52 (Cr <sub>2</sub> O <sub>3</sub> /Cr)) since it is reported as Cr <sub>2</sub> O <sub>3</sub> . Evaluated at 8760 hours/year.			<b>Cr<sub>2</sub>O<sub>3</sub> Usage (tons)</b>	<b>39,907.1</b>	<b>Subtotal Cr<sub>2</sub>O<sub>3</sub>(tpy)</b>	<b>0.01</b>

The permittee shall limit chromium compounds used in refractory shapes dryers for all shapes dryers to 61,800 tons in any consecutive 12-month period expressed as chromic oxide. (See Permit Condition 2)

EIQ Ref.#	EU#/Associated Equipment	MHDR (ton/hr)	Production tons/yr	Chromic oxide (35%)	<sup>1</sup> Emission Factor (lb/ton)	PTE (tpy)
F	East Pallet Dryer: Natural gas fired shapes dryer;	0.47	4117.2	1441.02	0.187	0.13
H	#3 Tunnel Kiln Double Dryer: Natural gas fired shapes dryer;	3.6	31536	11037.6	0.187	1.03
M	South Tunnel Dryer: Natural gas fired tunnel dryer;	3.6	31536	11037.6	0.187	1.03
N	Tunnel Kiln 2 Compartment Dryer	3.44	30134.4	10547.04	0.187	0.99
O	East Chemical Bond Dryer: Natural gas fire dryer;	4.5	39420	13797	0.187	1.29
P	West Chemical Bond Dryer: Natural gas fire dryer;	4.5	39420	13797	0.187	1.29
R	Sec. 41 Shipping Dryer: Natural gas fire dryer;	0.05	438	153.3	0.187	0.01
			Cr <sub>2</sub> O <sub>3</sub> Usage (tons)	<b>61,810.56</b>	Subtotal Cr <sub>2</sub> O <sub>3</sub> (tpy)	<b>5.78</b>

<sup>1</sup>**Emission Factor Source:** This PTE uses AP-42/FIRE for SCC 30500350 for PM<sub>tot</sub>, (Where PM<sub>tot</sub> is the sum of PM<sub>fil</sub> and PM<sub>con</sub>) and using the maximum concentration of Cr<sub>2</sub>O<sub>3</sub> (35%) in the raw material feed, for a worst case scenario. Evaluated at 8760 hours/year.

The permittee shall limit chromium compounds used in mixers that process refractory shapes mixes to 128,800 tons in any consecutive 12-month period expressed as chromic oxide (Cr<sub>2</sub>O<sub>3</sub>). (See Permit Condition 3)

EIQ Ref.#	EU#/Associated Equipment	MHDR (ton/hr)	Production tons/yr	Chromic oxide (35%)	<sup>1</sup> Emission Factor (lb/ton)	PTE (tpy)
DC-46	#1 Mixer; Batch dump system and mixer;	6	52,560	18,396	0.6	0.11
DC-47	#2 Mixer; Batch dump system and mixer;	6	52,560	18,396	0.6	0.11
DC-48	#3 Mixer; Batch dump system and mixer;	6	52,560	18,396	0.6	0.11
DC-49	#4 Mixer; Batch dump system and mixer;	6	52,560	18,396	0.6	0.11
DC-50	#5 Mixer; Batch dump system and mixer;	6	52,560	18,396	0.6	0.11
DC-51	#6 Mixer; Batch dump system and mixer;	6	52,560	18,396	0.6	0.11
DC-52	#7 Mixer; Batch dump system and mixer;	6	52,560	18,396	0.6	0.11
			Cr <sub>2</sub> O <sub>3</sub> Usage (tons)	<b>128,772</b>	Subtotal Cr <sub>2</sub> O <sub>3</sub> (tpy)	<b>0.77</b>

<sup>1</sup>**Emission Factor Source:** PM Emission factor from FIRE under SCC 30501223 for conservative estimate, and a maximum concentration of 35% Cr<sub>2</sub>O<sub>3</sub>.

The permittee shall limit chromium compounds used in refractory mortars mixes to 36,800 tons in any consecutive 12-month period expressed as chromic oxide (Cr<sub>2</sub>O<sub>3</sub>). (See Permit Condition 5)

EQ Ref.#	Description	MHDR (ton/hr)	Production tons/yr	Chromic oxide (35%)	<sup>1</sup> Emission Factor (lb/ton)	Controlled PTE (tpy)
DC-19	#1 Mortar Mixer	6	52,560	18,396	0.6	0.11
DC-20	#2 Mortar Mixer	6	52,560	18,396	0.6	0.11
<sup>1</sup> Emission Factor Source: PM Emission factor from FIRE under SCC 30501223, and a maximum concentration of 35% Cr <sub>2</sub> O <sub>3</sub> .			Cr <sub>2</sub> O <sub>3</sub> Usage (tons)	<b>36,792</b>	Subtotal Cr <sub>2</sub> O <sub>3</sub> PTE (tpy)	<b>0.22</b>

The permittee shall limit chromium compounds used in refractory plastics mixes to 24,500 tons in any consecutive 12-month period expressed as chromic oxide (Cr<sub>2</sub>O<sub>3</sub>). (See Permit Condition 6)

	Description	MHDR (ton/hr)	Production tons/yr	Chromic oxide (35%)	<sup>1</sup> Emission Factor (lb/ton)	Controlled PTE (tpy)
DC-21	Plastics Batching and Mixing;	8	70,080	24,528	0.6	0.15
<sup>1</sup> Emission Factor Source: PM Emission factor from FIRE under SCC 30501223, and a maximum concentration of 35% Cr <sub>2</sub> O <sub>3</sub> .					Subtotal Cr <sub>2</sub> O <sub>3</sub> (tpy)	<b>0.15</b>

The permittee shall limit chromium compounds used at bag breaking to 78,800 tons in any consecutive 12-month period expressed as chromic oxide (Cr<sub>2</sub>O<sub>3</sub>). (See Permit Condition 7)

EQ Ref.#	Description	Production tons/yr	<sup>1</sup> Emission Factor (lb/ton)	Controlled Cr <sub>2</sub> O <sub>3</sub> PTE (tpy)
DC-27/28	Tote Can Sack Breaking; & Tote Can Bulk Bag;	<b>78,800</b>	0.2442569	<b>0.19</b>
<sup>1</sup> Emission Factor Source: 1996 Stack test uncontrolled PM <sub>10</sub> Emission Factor doubled assuming PM is 2:1 to PM <sub>10</sub> .				

The permittee shall limit chromium compounds used at batching stations for refractory shapes to 128,800 tons in any consecutive 12-month period expressed as chromic oxide (Cr<sub>2</sub>O<sub>3</sub>). (See Permit Condition 8)

EQ Ref.#	Description	MHDR (ton/hr)	Production tons/yr	Chromic oxide (35%)	<sup>1</sup> Emission Factor (lb/ton)	Controlled PTE (tpy)
DC-30	Weigh Scales #5 - #8;	6	52,560	18,396	0.6	0.11
DC-36	Weigh Scales #1 - #4;	6	52,560	18,396	0.6	0.11
DC-44	Automated Batching 10 Station;	30	262,800	91,980	0.6	0.55
<sup>1</sup> Emission Factor Source: PM Emission factor from FIRE under SCC 30501223				<b>128,772</b>	Subtotal Cr <sub>2</sub> O <sub>3</sub> (tpy)	<b>0.77</b>
<sup>1</sup> Emission Factor Source: PM Emission factor from FIRE under SCC 30501223, and a maximum concentration of 35% Cr <sub>2</sub> O <sub>3</sub> .					Total Cr <sub>2</sub> O <sub>3</sub> (tpy)	<b>7.89</b>
<sup>2</sup> Other HAP includes combustion emissions and HAP not included in the HCl, HF and Cr PTE calculations. All units were evaluated at 8760 hours/year. Other HAP includes combustion sources and remaining HAP (less Cr <sub>2</sub> O <sub>3</sub> , HCl, and HF)					<sup>2</sup> Other HAP	<b>1.96</b>
					HAP	<b>22.17</b>

	total(tpy)	
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**10 CSR 10-6.400 Restriction of Emission of Particulate Matter From Industrial Processes**

The following units have federally enforceable conditions requiring at least 90% control for particulate emissions, and are exempt from 10 CSR 10-6.400 per §6.400(1)(B)15.

EIQ Reference #	Emission Unit Description	Construction Permit # (Location in Title V)
DC-11	Ground Material Bins: Conveying: belt conveyor, elevator, screen, consigners, bins, shredder and Sturdevent mill.	Construction Permit 0199-015 (PERMIT CONDITION 4)
DC-46	#1 Mixer; Batch dump system and mixer.	
DC-47	#2 Mixer; Batch dump system and mixer.	
DC-48	#3 Mixer; Batch dump system and mixer.	
DC-49	#4 Mixer; Batch dump system and mixer.	
DC-50	#5 Mixer; Batch dump system and mixer.	
DC-51	#6 Mixer; Batch dump system and mixer.	
DC-52	#7 Mixer; Batch dump system and mixer.	
DC-38	Ball Milling and Screening: Belt conveyor, ball mill, elevator and screen.	Construction Permit 1296-009 (PERMIT CONDITION 9)
DC-55B	Monoliths Process: Tote Can Fill Station.	Construction Permit 082000-008 (PERMIT CONDITION 10)
DC-54	Monoliths Process: Zirconia Mixer.	
DC-56	Monoliths: Ribbon Mixer and Sacking.	
DC-57	Monoliths: Belt Conveyor and Feed Hopper.	
DC-58	Monoliths: Bagger.	
DC-59	Monoliths: Storage Bin.	
DC-60	Monoliths: Storage Bin.	
DC-53	Bag breaker, minor additives stations, weigh hopper, belt conveyor and visil mixer.	Construction Permit 0699-029 (PERMIT CONDITION 11)
DC-61	2- Belt conveyors and bucket elevator.	Construction Permit 032001-008 (PERMIT CONDITION 12)

There are exemptions provided in the rule for sources with an uncontrolled PTE of 0.5 lbs/hour under §6.400(B)12 and for sources with an uncontrolled PTE less than the PM emission limits of the rule under §6.400(B)16. As the following table demonstrates, the PM emission units at this site fall into one of the categories exempted under §6.400(B)12 and/or §6.400(B)16.

EIQ ref#	Process Weight Rate (ton/hr)	PM Emission Factor (lb/ton)	Potential Uncontrolled Emission Rate (lb/hr)	§6.400 Emission Rate Limit (lb/hr)	SCC/ FIRE Emission Factor used
B	4.75	0.96	4.56	11.65	30500311/ PM ,Primary
C	3.60	0.96	3.46	9.67	30500311/ PM ,Primary

EIQ ref#	Process Weight Rate (ton/hr)	PM Emission Factor (lb/ton)	Potential Uncontrolled Emission Rate (lb/hr)	§6.400 Emission Rate Limit (lb/hr)	SCC/ FIRE Emission Factor used
D	3.60	0.96	3.46	9.67	30500311/ PM ,Primary
E	0.016	0.07	0.0035	0.47	30500314 PM, filterable
F	0.47	0.19	0.09	2.47	30500350/PM Con + PM filterable
H	2.50	0.19	0.47	7.57	30500350/PM Con + PM filterable
K	0.08	0.07	0.01	0.75	30500314 PM, filterable
L	50.00	0.15	7.67	44.58	2002 stack test PM10 EF doubled
M	3.60	0.19	0.67	9.67	30500350/PM Con + PM filterable
N	3.44	0.19	0.64	9.38	30500350/PM Con + PM filterable
O	4.50	0.19	0.84	11.23	30500350/PM Con + PM filterable
P	4.50	0.19	0.84	11.23	30500350/PM Con + PM filterable
Q	0.05	0.07	0.00	0.55	30500314 PM, filterable
R	0.05	0.19	0.01	0.55	30500350/PM Con + PM filterable
S	0.92	0.07	0.06	3.88	30500314 PM, filterable
DC-01	4.64	0.30	1.39	11.46	30500612 PM <sub>10</sub> EF, doubled
DC-02	4.64	0.30	1.39	11.46	30500612 PM <sub>10</sub> EF, doubled
DC-03	4.64	0.30	1.39	11.46	30500612 PM <sub>10</sub> EF, doubled
DC-04	4.64	0.30	1.39	11.46	30500612 PM <sub>10</sub> EF, doubled
DC-05	4.64	0.30	1.39	11.46	30500612 PM <sub>10</sub> EF, doubled
DC-06	4.64	0.30	1.39	11.46	30500612 PM <sub>10</sub> EF, doubled
DC-07	4.64	0.30	1.39	11.46	30500612 PM <sub>10</sub> EF, doubled
DC-08	4.64	0.30	1.39	11.46	30500612 PM <sub>10</sub> EF, doubled
DC-09	27.00	0.52	14.04	37.31	30500609/ PM <sub>10</sub> EF doubled
DC-10	2.50	0.52	1.30	7.58	30500609/ PM <sub>10</sub> EF doubled
DC-11	27.00	0.24	6.48	37.31	30500612 PM <sub>10</sub> EF doubled
DC-12	50.00	0.30	15.00	44.58	30500612 PM <sub>10</sub> EF, doubled
DC-13	15.00	0.52	7.80	25.16	30500609/ PM <sub>10</sub> EF doubled
DC-14	50.00	0.30	15.00	44.58	30500612/ PM <sub>10</sub> EF, doubled
DC-15	15.00	1.40	21.00	25.16	30500308
DC-16	6.00	0.60	3.60	13.62	30501223/PM filterable
DC-17	6.00	0.60	3.60	13.62	30501223/PM filterable
DC-18	4.00	0.60	2.40	10.40	30501223/PM filterable
DC-19	6.00	0.60	3.60	13.62	30501223/PM filterable
DC-20	6.00	0.60	3.60	13.62	30501223/PM filterable
DC-21	8.00	0.60	4.80	16.51	30501223/PM filterable
DC-22	3.00	0.30	0.90	8.56	30500612 PM <sub>10</sub> EF, doubled
DC-23	8.00	0.30	2.40	16.51	30500612 PM <sub>10</sub> EF, doubled

EIQ ref#	Process Weight Rate (ton/hr)	PM Emission Factor (lb/ton)	Potential Uncontrolled Emission Rate (lb/hr)	§6.400 Emission Rate Limit (lb/hr)	SCC/ FIRE Emission Factor used
DC-24	3.00	0.30	0.90	8.56	30500612 PM <sub>10</sub> EF, doubled
DC-25	8.00	0.30	2.40	16.51	30500612 PM <sub>10</sub> EF, doubled
DC-26	3.00	0.30	0.90	8.56	30500612 PM <sub>10</sub> EF, doubled
DC-27	3.00	0.30	0.90	8.56	30500612 PM <sub>10</sub> EF, doubled
DC-28	6.00	0.30	1.80	13.62	30500612 PM <sub>10</sub> EF, doubled
DC-29	12.00	1.40	16.80	21.67	30500308
DC-30	2.50	0.60	1.50	7.58	30501223/ PM filterable
DC-31	1.00	0.30	0.30	4.10	30500612/ PM <sub>10</sub> EF, doubled
DC-32	0.08	0.30	0.02	4.10	30500612/ PM <sub>10</sub> EF, doubled
DC-33	2.50	0.60	1.50	7.58	30501223/PM filterable
DC-34	0.00	0.40	0.00	0.04	30700802/2010 EIQ EF used
DC-35	3.00	0.30	0.90	8.56	30500612/ PM <sub>10</sub> EF, doubled
DC-36	6.00	0.60	3.60	13.62	30501223/PM filterable
DC-38	3.00	0.22	0.66	8.56	30500609 PM10 EF doubled
DC-39	3.00	0.30	0.90	8.56	30500612 PM <sub>10</sub> EF, doubled
DC-40	3.00	0.30	0.90	8.56	30500612 PM <sub>10</sub> EF, doubled
DC-41	0.50	0.30	0.15	2.52	30500612 PM <sub>10</sub> EF, doubled
DC-42	1.00	0.03	0.03	4.10	30500302 PM filterable
DC-43	0.50	0.30	0.15	2.58	30500612 PM <sub>10</sub> EF, doubled
DC-44	30.00	0.30	9.00	40.04	30500612 PM <sub>10</sub> EF, doubled
DC-45	100	0.24	24	51.28	30500612 PM10 EF doubled
DC-46	6.00	0.6	3.6	13.62	30501223 PM filterable
DC-47	6.00	0.6	3.6	13.62	30501223 PM filterable
DC-48	6.00	0.6	3.6	13.62	30501223 PM filterable
DC-49	6.00	0.6	3.6	13.62	30501223 PM filterable
DC-50	6.00	0.6	3.6	13.62	30501223 PM filterable
DC-51	6.00	0.6	3.6	13.62	30501223 PM filterable
DC-52	6.00	0.6	3.6	13.62	30501223 PM filterable
DC-53	6	0.6	3.6	13.62	30501223 PM filterable
DC-55B	3.00	0.12	0.36	8.56	30500612 PM10 EF doubled
DC-55D	6.00	0.60	3.60	13.62	30501223/PM, filterable
DC-56	14	0.6	8.4	24.03	30501223 PM filterable
DC-57	14	0.24	3.36	24.03	30500612 PM10 EF doubled
DC-58	14	0.24	3.36	24.03	30500612 PM10 EF doubled

EIQ ref#	Process Weight Rate (ton/hr)	PM Emission Factor (lb/ton)	Potential Uncontrolled Emission Rate (lb/hr)	§6.400 Emission Rate Limit (lb/hr)	SCC/ FIRE Emission Factor used
DC-59	30	0.24	7.2	40.04	30500612 PM10 EF doubled
DC-60	30	0.24	7.2	40.04	30500612 PM10 EF doubled
DC-61	50	0.24	12	44.58	30500612 PM10 EF doubled

**Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis**

Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons:

1. The specific pollutant regulated by that rule is not emitted by the installation;
2. The installation is not in the source category regulated by that rule;
3. The installation is not in the county or specific area that is regulated under the authority of that rule;
4. The installation does not contain the type of emission unit which is regulated by that rule;
5. The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the APCP's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation which was not previously cited, the installation shall submit to the APCP a schedule for achieving compliance for that regulation(s).

## Response to Public Comments

### **EPA Comment #1:**

The Installation Description on the draft permit cover sheet and in section I indicates Harbison-Walker – Vandalia (facility) has the potential to emit major levels of carbon monoxide (CO) pollutants. Page SB-2, in the Statement of Basis, includes a table showing the potential to emit (PTE) for this facility. The table lists the CO potential to emit at 97.08 tons per year (tpy). This CO PTE is neither a major source as defined in 40 CFR Part 70, nor does it rise to the level requiring a Part 70 operating permit as per 10 CSR 10-6.065(2)(A).

However, the table of page SB-2 does show the PTE for volatile organic compounds (VOC) to be 100.71 tpy; the PTE for particulate matter of 10 microns in diameter (PM<sub>10</sub>) to be 616.14 tpy; and the PTE for particulate matter of 2.5 microns in diameter (PM<sub>2.5</sub>) to be 165.70 tpy. Therefore, VOC, PM<sub>10</sub> and PM<sub>2.5</sub> would appear to cause HarbisonWalker International, Inc. to be a major source. EPA recommends MDNR review the installation descriptions and consider modifications to reflect the Harbison-Walker – Vandalia PTE.

### **Missouri Air Pollution Control Program Response to EPA Comment #1:**

The facility description on both the title page and in section I have been updated to match the pollutants that have the potential to emit major source levels of pollutants listed in the PTE Table in the Statement of Basis.

### **EPA Comment #2:**

The Installation Description in the draft operating permit cover sheet and in section I indicates that HarbisonWalker International, Inc. is a synthetic minor source of hazardous air pollutants (HAP) by voluntarily limiting the usage of raw materials which contribute to the formation of HAP. However, the draft operating permit does not contain a(any) permit condition(s) which establish a voluntary HAP limit. The draft permit, however, does contain permit conditions which voluntarily limit the amount of raw clay and chromium compounds (expressed as Cr<sub>2</sub>O<sub>3</sub>).

Furthermore, the Other Regulatory Determination section in the Statement of Basis provides detailed explanations, which are all written as permit conditions, describing how raw clay and chromium compounds limits effectively limit HAP. The operating permit is the enforceable document and must contain all of the enforceable terms and conditions, as well as additional information needed to make the terms meaningful. Therefore, it appears that each one of the HAP limiting conditions listed in the Statement of Basis are intended to be enforceable and EPA recommends MDNR included within the appropriate permit condition.

Also, the table associated with Permit Condition 8 in the Statement of Basis (page SB-5) provides a total of all Cr<sub>2</sub>O<sub>3</sub>; Other HAP; and total HAP. The total of all Cr<sub>2</sub>O<sub>3</sub> shows as 7.12 tpy. Yet when the Cr<sub>2</sub>O<sub>3</sub> value given for Permit Condition 1(0.01 tpy); added to the value given for Permit Condition 2 (5.78 tpy); added to the value given for Permit Condition 3 (0.77 tpy); added to the value given for Permit Condition 5 (0.22 tpy); added to the value given for Permit Condition 6 (0.15 tpy);

added to the value given for Permit Condition 7 (0.19 tpy); is added to the value given for Permit Condition 8 (0.77 tpy); the total is 7.99 tpy. Additionally, the Other HAP includes combustion emissions and yet there is no permit condition limiting either the type of fuel used in the combustion sources or the quantity of fuel(s) used for the combustion sources. Finally, there is no demonstration as to show the process for the development of the 1.96 tpy of Other HAP. EPA recommends MDNR confirm the Total HAP emission amount and provide a permit condition addressing the Other HAP emission.

### **Missouri Air Pollution Control Program Response to EPA Comment #2:**

By limiting the amount of raw material used in each type of process, a HAP limitation is being set at 10/25. The statement of basis is demonstrating how these raw material limitations is equivalent to a 10/25 HAP limit. These demonstrations are therefore not intended to be permit conditions but an explanation of our reasoning and have not been included into the body of the operating permit.

The summation table for HAPs included in the statement of basis has been updated to correct the total Cr<sub>2</sub>O<sub>3</sub> and total HAP amounts.

### **EPA Comment #3:**

On page SB-6, in the Statement of Basis, is a list of emission units which have been deemed to be exempt from 10 CSR 10-6.400(1)(B)15 because they "have federally enforceable conditions requiring 90% control for particulate emissions." However none of the referenced permit conditions (Permit Condition 4; Permit Condition 9; Permit Condition 10; Permit Condition 11; and Permit Condition 12) include a requirement that the permittee must meet 90% control. If in fact these devices must meet 90% control, then this requirement should be included in each of the appropriate permit conditions; along with appropriate periodic compliance testing to verify the 90% control. Also, these devices are likely subject to CAM. Therefore, EPA recommends MDNR include a control efficiency requirement with periodic monitoring and CAM for Permit Condition 4; Permit Condition 9; Permit Condition 10; Permit Condition 11; and Permit Condition 12.

### **Missouri Air Pollution Control Program Response to EPA Comment #3:**

Permit Conditions 4, 9, 10, 11, and 12 all contain special conditions that maintain the removal efficiency of the baghouses associated with the permit conditions. These conditions provide operational and maintenance requirements that ensure that that baghouses will be operated and maintained according to the manufacturer's specifications. Therefore, due to the inclusion of these special conditions, no periodic testing will be required to verify the control efficiency of the baghouses.

Also, the second table under 10 CSR 10-6.400 *Restriction of Emission of Particulate Matter from Industrial Processes*, in the Other Regulatory Determinations section of the Statement of Basis, demonstrates that each of these emission units fall into one of the categories exempted under §6.400(B)(12) and/or §6.400(B)(16).

**EPA Comment #4:**

On page 5 of the draft operating permit, is a list of construction permits that says: "these documents have been incorporated by reference into the permit." EPA is unclear as to the meaning regarding "document incorporated by reference." If MDNR means that these construction permits were relied upon in preparation of the operating permit, then this list should be included in the Statement of Basis. EPA suggests MDNR clarify the intent of the statement on page 5.

**Missouri Air Pollution Control Program Response to EPA Comment #4:**

The incorporated reference documents have been moved to the Statement of Basis of the Operating Permit under "Permit Reference Documents".

**EPA Comment #5:**

Permit Condition 4; Permit Condition 9; Permit Condition 10; Permit Condition 11; and Permit Condition 12 all have the same monitoring/record keeping requirements to monitor and record pressure drops and maintain an operating and maintenance log. MDNR's customary practice is to include an example data collection sheet as an attachment in the operating permit and reference its use in the applicable requirement. Attachment C to the HarbisonWalker International, Inc. draft operating permit appears to satisfy the envisioned requirements of the operating and maintenance log, however, Attachment C is not referenced in Permit Condition 4; Permit Condition 9; Permit Condition 10; Permit Condition 11; and Permit Condition 12. EPA recommends MDNR include appropriate attachments and references for the monitoring and record keeping requirements in Permit Condition 4; Permit Condition 9; Permit Condition 10; Permit Condition 11; and Permit Condition 12.

**Missouri Air Pollution Control Program Response to EPA Comment #5:**

Attachment G has been added to the Operating Permit in order to track pressure drop. References were added to permit condition 12 for Attachment G.

**EPA Comment #6:**

The emission limitation in Permit Condition 13 indicates the compliance responsibility falls on the "owner or other person." These emission limitations are the responsibility of Harbison-Walker – Vandalia (permittee) and therefore, EPA recommends MDNR use "permittee" in lieu of "owner or other person" in the emission limitations in Permit Condition 13.

**Missouri Air Pollution Control Program Response to EPA Comment #6:**

"Owner or other person" as mentioned in this permit condition has been changed to "the permittee" in all instances.

**EPA Comment #7:**

The open burning requirements in Section IV of the draft operating permit include specific requirements for the Kansas City metropolitan area; Springfield-Greene County area; St. Joseph area; and St. Louis metropolitan area. HarbisonWalker International, Inc. is located in Audrain County which appears to be outside these four (4) specific areas. Operating permit shall contain applicable requirements for the identified facility and EPA recommends MDNR remove the open burning requirements that are not applicable to the permitted facility.

**Missouri Air Pollution Control Program Response to EPA Comment #7:**

The Open Burning requirement in SECTION VII has been updated to the current language and the specific area requirements have been removed.

**EPA Comment #8:**

General permit requirements in Section V includes several requirements for the permittee to submit various information to EPA Region VII. The draft operating permit provides an incorrect EPA Region VII address and EPA recommends MDNR show the correct EPA Region VII mailing address in Section V.

**Missouri Air Pollution Control Program Response to EPA Comment #8:**

All EPA addresses have been updated to the current address for EPA Region VII.

**EPA Comment #9:**

Page SB-1 of the Statement of Basis includes a section in construction permit revisions: The draft operating permit includes an entry for Construction Permit #0581-014A and says: The permit contains only one special condition: The production rate in tons of finished material per year after the new shuttle kiln installation is complete shall not be increased beyond the existing rate at the time of this permits issuance." 10 CSR 10-6.065(6)(C) requires every operating permit issued to contain all requirements applicable to the installation at the time of the operating permit issuance. If the special condition in Construction Permit #0581-014A remains applicable, it must be included in the operating permit and not in the Statement of Basis. Therefore, EPA recommends MDNR include an operating permit condition incorporating the applicable requirements of Construction Permit #0581-014A.

**Missouri Air Pollution Control Program Response to EPA Comment #9:**

This special condition should have been superseded when Construction Permit No. 0199-015 was issued in December of 1998. This construction permit added grinding, screening, and mixing operations that allowed for the production to increase.

**EPA Comment #10:**

Section IV: Core Permit Requirements includes and emission limitation derived from 10 CSR 10-6.220: *Restriction of Emissions of Visible Air Contaminants*. Permit Condition 13 is included in this draft operating permit to establish emission limitations for specific emission units subject to 10 CSR 10-6.220: *Restriction of Emissions of Visible Air Contaminants*. This appears to be an unnecessary redundancy and EPA recommends MDNR omit the emission limitations under 10 CSR 10-6.220 in Section IV.

**Missouri Air Pollution Control Program Response to EPA Comment #10:**

The 10 CSR 10-6.220 permit condition has been removed from the Core Requirements. It is still listed as a Permit Condition.

**EPA Comment #11:**

The Statement of Basis included with this draft operating permit includes no mention of greenhouse gases (GHG); except within the updated potential to emit table for the installation. The table includes CO<sub>2</sub>e as a pollutant; and a potential to emit of 95,598 tons per year. The statement of basis included with many, if not all, of other Part 70 operating permits recently issued by MDNR, have included a section describing the permitted facility greenhouse gases (GHG) status. Therefore MDNR should consider including the following standard language for sources that are not major for greenhouse gases but are subject to the mandatory reporting rule; in the Statement of Basis.

"This installation is not a major source for greenhouse gases. While Part 70 Permits generally do not establish new emission limits, they consolidate applicable requirements, as defined in Missouri State Regulations 10 CSR 10-6.020 (2)(A)23, into a comprehensive air permit. This source is subject to 40 CFR Part 98 - *Mandatory Greenhouse Gas Reporting Rule*. However, the preamble of the GHG Reporting Rule clarifies that Part 98 requirements do not have to be incorporated in Part 70 permits operating permits at this time. In addition, Missouri regulations do not require the installation to report CO<sub>2</sub> emissions in their Missouri Emissions Inventory Questionnaire; therefore, the installation's actual CO<sub>2</sub> emissions were not included within this permit. The applicant is required to report actual CO<sub>2</sub> emissions data directly to EPA."

The public may obtain CO<sub>2</sub>e emission data by visiting  
<http://epa.gov/ghgreporting/ghgdata/reportingdatasets.html>.

EPA recommends MDNR modify the Statement of Basis to include their customary GHG Statement of Basis language.

**Missouri Air Pollution Control Program Response to EPA Comment #11:**

The recommended language for Greenhouse Gas Emissions has been added to the Statement of Basis.

**EPA Comment #12:**

First, §6.065(C)l. in the Air Pollution Control Regulation for the Entire State of Missouri identifies the standard requirements that every operating permit issued shall contain at the time of issuance. 10 CSR 10-6.065(6)(C)l.I. specifically addresses "Reasonably anticipated operating scenarios." §6.065(6)(C)l states that the permit shall include terms and conditions for reasonable anticipated scenarios identified by the applicant and approved by the permitting authority. The permit shall authorize the permittee to make changes among alternative operating scenarios authorized in the permit without notice, but shall require the permittee, contemporaneous with changing from one (1) operating scenario to another, to record in a log at the permitted installation the scenario under which it is operating. The permit shield shall apply to these terms and conditions. It has been MDNR's customary practice to include this regulatory requirement in Section V. General Permit Requirements and describe the reasonably anticipated permit terms and conditions associated with the reasonably anticipated operating scenario(s). However, the final draft Part 70 Operating Permit for HarbisonWalker International, Inc., is silent regarding reasonably anticipated operating scenario.

In their Part 70 Operating Permit application submitted on November 11, 2011, HarbisonWalker International, Inc. provided what would appear to be a complete "Form OP-D04 --Alternate Operating Scenario" (Pages 120 through 156) indicating they wish to include an alternate operating scenario in their Part 70 operating permit. Therefore, EPA strongly recommends that MDNR review the HarbisonWalker International, Inc. permit application and address the permittee's reasonable anticipated operating scenario within the final Part 70 Operating Permit.

**Missouri Air Pollution Control Program Response to EPA Comment #12:**

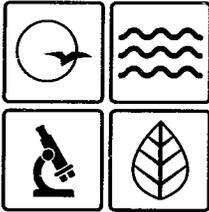
The Alternate Operating Scenarios from pages 120 through 156 were already included in the operating permit as Permit Condition 1 through Permit Condition 3 and Permit Condition 5 through Permit Condition 8. Therefore, no changes were made to the operating permit due to this comment.

**EPA Comment #13:**

Second, Harbison - Walker - Vandalia Part 70 Operating Permit renewal application includes Compliance Determination Method (Form OP-D05) for sixty-four (64) fabric filters and one (1) cyclone. These completed Form OP-D05 provide a substantial amount of detail regarding HarbisonWalker International, Inc.'s proposed monitoring, to assure compliance, including the operating pressure drop ranges for each of these sixty-five (65) pieces of pollution control equipment; filter cleaning sequence frequency; and equipment inspection frequency. The Final Draft Part 70 Operating Permit generically states that the permittee shall maintain the pollution control devices in accordance with manufacturer's specifications. This approach discounts the specificity provided by the permittee by not providing the detailed information, which when included, will assist the permittee, regulatory inspectors and the public with the verification of HarbisonWalker International, Inc.'s compliant operation. Therefore, EPA strongly recommends that MDNR consider revising the appropriate permit conditions in the Final Draft Part 70 Operating Permit to include the operational and maintenance detail the permittee has provided in their application.

**Missouri Air Pollution Control Program Response to EPA Comment #13:**

Additional monitoring and recordkeeping requirements have been added for the emission units that are required to have a fabric filter or a cyclone.



Missouri Department of

dnr.mo.gov

# NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

MAR 13 2017

Mr. Michael Schalk  
Harbison Walker International, Inc.  
1000 Booker Street  
Vandalia, MO 63382

Re: Harbison Walker International, Inc., 007-0003  
Permit Number: OP2017-015

Dear Mr. Schalk:

Enclosed with this letter is your Part 70 operating permit. Please review this document carefully. Operation of your installation in accordance with the rules and regulations cited in this document is necessary for continued compliance. It is very important that you read and understand the requirements contained in your permit.

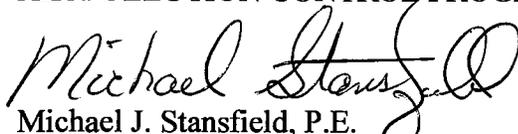
This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request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

You may appeal this permit to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.078.16 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you have any questions or need additional information regarding this permit, please contact the Air Pollution Control Program (APCP) at (573) 751-4817, or you may write to the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

  
Michael J. Stansfield, P.E.  
Operating Permit Unit Chief

MJS:dbj

Enclosures

c: Robert Cheever, US EPA Region VII  
PAMS File: 2011-11-010



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