



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

APR 07 2015

Mr. Bret D. Graham
ICL Performance Products LP
8201 Idaho Ave.
St. Louis, MO 63111

Re: ICL Performance Products LP, 510-0070
Permit Number: OP2015-006

Dear Mr. Graham:

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.

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

A handwritten signature in black ink that reads "Michael J. Stansfield". The signature is written in a cursive style.

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

MJS:rer

Enclosures

c: Robert Cheever, US EPA Region VII
St. Louis Regional Office
PAMS File: 2008-08-067





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.

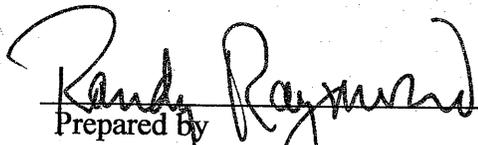
Operating Permit Number: OP2015-006
Expiration Date: APR 07 2020
Installation ID: 510-0070
Project Number: 2008-08-067

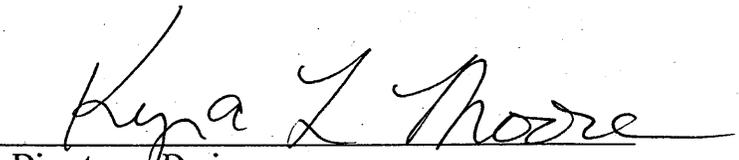
Installation Name and Address
ICL Performance Products LP
8201 Idaho Ave.
St. Louis, MO 63111
St. Louis City County

Parent Company's Name and Address
ICL Performance Products, LP
622 Emerson Road, Suite 500
St. Louis MO, 63141

Installation Description:

Phosphorus chemicals and phosphate salts manufacturing and ancillary activities. The potential to emit of this facility exceeds the Part 70 Installation thresholds for oxides of nitrogen and carbon monoxide.


Prepared by
Randy E. Raymond
Operating Permit Unit


Director or Designee
Department of Natural Resources
APR 07 2015

Effective Date

Table of Contents

I. INSTALLATION DESCRIPTION AND EQUIPMENT LISTING	5
INSTALLATION AND COMPANY DESCRIPTION.....	5
EMISSION UNITS WITH LIMITATIONS.....	6
EMISSION UNITS WITHOUT LIMITATIONS	7
DOCUMENTS RELIED UPON	8
II. PLANT WIDE EMISSION LIMITATIONS.....	10
III. EMISSION UNIT SPECIFIC EMISSION LIMITATIONS	11
VISIBLE EMISSIONS SOURCES	11
Permit Condition 1	13
All Visible Emissions Sources (except EP-32, EP-54 and EP-66) 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants	13
Permit Condition 2.....	13
EP-32 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permit # 94-10-108	13
Permit Condition 3.....	14
EP-54 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permit 94-10-117	14
Permit Condition 4.....	14
EP-66 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permit 94-10-109, Revised by Permit Matter No. 99-02-014.....	14
KP SALTS PRODUCTION & TKPP SOLUTIONS BLENDING UNITS	14
EP-106	14
EP-107	14
EP-108	14
EP-109	14
EP-110	14
EP-111	14
EP-112	14
Permit Condition 1	15
EP-106, EP-107, EP-110, EP-111, EP-112 10 CSR 10-6.400 Restriction of Emission of Particulate Matter From Industrial Processes.....	15
Permit Condition 2.....	15
EP-106, EP-107, EP-108, EP-109, EP-110, EP-112 10 CSR 10-6.060 Construction Permits Required; City of St. Louis Local Construction Permit # 11-06-013.....	15
Permit Condition 3	15
EP-106, EP-107, EP-108, EP-109, EP-110, EP-111, EP-112 10 CSR 10-6.060 Construction Permits Required; City of St. Louis Local Construction Permit # 11-06-013.....	15
Permit Condition 4.....	16
EP-107 10 CSR 10-6.060 Construction Permits Required; City of St. Louis Local Construction Permit # 11-06-013	16
STPP GRANULAR BULK LOADING.....	17
EP-22	17
Permit Condition 1	17
EP-22 10 CSR 10-6.060 Construction Permits Required; City of St. Louis Local Construction Permit # 07-12-025	17
LIME SILO GROUP	18
EP-26	18
EP-98	18
EP-99	18
EP-100	18
Permit Condition 1	18
All Lime Silo Group 10 CSR 10-6.060 Construction Permits Required; City of St. Louis Local Construction Permit # 03-01-00418	
Permit Condition 2	18

EP-98, EP-99, EP-100 10 CSR 10-6.060 Construction Permits Required; City of St. Louis Local Construction Permit # 03-01-004	18
Permit Condition 3	19
EP-26 10 CSR 10-6.060 Construction Permits Required; City of St. Louis Local Construction Permit # 072013-016.....	19
TRICALCIUM PHOSPHATE GRINDER AND AIR CLASSIFIER SYSTEM.....	20
EP-105	20
Permit Condition 1	20
EP-105 10 CSR 10-6.060 Construction Permits Required; City of St. Louis Local Construction Permit # 09-01-003	20
BOILER GROUP	20
EP-13	20
EP-96	20
Permit Condition 1	21
Boiler Group 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permit # 01-06-018PM ...	21
CALCIUM PHOSPHATE PACKING	22
EP-54	22
Calcium Phosphate Packing Permit Condition 1	22
10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permit 94-10-117 10 CSR 10-6.400 Restrictions of Emissions of PM from Industrial Processes.....	22
MCP & STP PACKING	22
EP-61	22
EP-62	22
EP-63	23
Permit Condition 1	23
EP-61, EP-62 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permits 94-10-102 and 94-10-103.....	23
Permit Condition 2.....	24
EP-63 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permits 07-04-006.....	24
STPP PACKAGING TRANSFER SYSTEM	24
EP-102	24
EP-103	24
Permit Condition 1	25
EP-63 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permits 07-04-006.....	25
DCP PACKING	25
EP-67	25
EP-68	26
Permit Condition 1	26
DCP Packing 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permits 94-10-100 & 94-10-101 10 CSR 10-6.400 Restrictions of Emissions of PM from Industrial Processes.....	26
SALP	27
EP-92	27
EP-93	27
EP-94	27
Permit Condition 1	27
All SALP Milling 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permit 01-06-018 City of St. Louis Local Construction Permit 01-06-018PM.....	27
EMERGENCY GENERATOR	28
EP-113	28
Permit Condition 1	28
EP-113 10 CSR 10-6.070 New Source Performance Regulations 40 CFR Part 63, MACT Subpart ZZZZ —National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.....	28
IV. CORE PERMIT REQUIREMENTS	31
V. GENERAL PERMIT REQUIREMENTS.....	41
VI. ATTACHMENTS	47

ATTACHMENT A	48
Visible Emissions Monitoring Observations.....	48
ATTACHMENT B	49
EP-110 Pressure Drop.....	49
ATTACHMENT C	50
Method 9 Opacity Emissions Observations	50
ATTACHMENT D	51
Throughput and PM Emissions Tracking.....	51
ATTACHMENT E	53
Example Calcium Packing and Magnet Checklist	53
ATTACHMENT F.....	54
Example Department 20 Checklist.....	54
ATTACHMENT G	55
Example Building 2 Pressure Drop Log Sheet.....	55
ATTACHMENT H	56
Example of maintenance activities tracking.....	56
ATTACHMENT I.....	57
Building 19 Operating Sheet.....	57
ATTACHMENT J	58
Example STPP Material Handlers Sheet.....	58
ATTACHMENT K.....	59
Example Daily Fuel Readings.....	59
ATTACHMENT L	60
EP-92, EP-93 & EP-94 Emission Factors	60
ATTACHMENT M	61
Existing Emergency SI RICE at an Area Source	61
ATTACHMENT N	66
Flow Diagram/Schematic for Cut-In & Premix	66

I. Installation Description and Equipment Listing

INSTALLATION AND COMPANY DESCRIPTION

ICL Performance Products LP is a supplier of phosphoric acid and phosphate salts, producing a complete line of phosphate derivative products in the industry found in everything from baked goods and beverages, to cleaning products and water treatment, to asphalt and semiconductors.

ICL Performance Products provides a complete line of multifunctional products for food, pharmaceutical, industrial and high-tech applications through phosphate engineering and production. For more information visit ICL's website at: www.icl-group.com.

The Carondelet Plant is located on nineteen (19) acres in the south St. Louis community of Carondelet. The area is a mixed commercial and residential community, with apartments, small residences, and numerous small businesses located in close proximity to the plant's fence line. A channelized stream, the River des Peres, flows to the south of the plant, emptying into the Mississippi River about one mile east of the plant.

The Carondelet plant ships products in bags, drums, supersacks, tank trucks, and railcars.

Reported Air Pollutant Emissions, tons per year					
Pollutants	2013	2012	2011	2010	2009
Particulate Matter ≤ Ten Microns (PM ₁₀)	12.0	11.5	12.6	11.4	9.8
Particulate Matter ≤ 2.5 Microns (PM _{2.5})	12.0	1.1	1.1	1.2	1.0
Sulfur Oxides (SO _x)	0.1	0.1	0.1	0.1	2.3
Nitrogen Oxides (NO _x)	7.9	6.8	7.1	8.1	5.7
Volatile Organic Compounds(VOC)	1.2	1.1	1.1	1.1	0.9
Carbon Monoxide (CO)	25.4	23.2	23.2	23.5	18.7
Lead (Pb)	-- ¹	-- ²	--	--	--
Hazardous Air Pollutants (HAPs)	0.0	0.0	--	--	--
Ammonia (NH ₃)	0.5	0.5	0.5	0.5	0.4

¹ Below the reporting threshold or not reported.

² Below the reporting threshold or not reported.

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.

Emission Unit Label	Description
EP-13	BOILER STACKS (No. 2 Boiler)
EP-14	STPP REACTOR
EP-16	NO. 4,5,6 STPP DRYERS
EP-17	NO. 7,8 STPP DRYERS
EP-18	STP BRINKS
EP-19	STP GRANULAR
EP-22	STPP Bulk Loading System
EP-26	North Lime Silo
EP-32	TCP REWORK SYSTEM
EP-35	DCP MILL (Burner)
EP-35	DCP MILL
EP-39	NO. 1&2 TCP DRYER
EP-40	NO. 3&4 TCP DRYER
EP-42	TCP IMP MILL (Burner)
EP-42	TCP IMP MILL
EP-43	TCP BLENDERS & PACKERS
EP-45	ALUMINA SILO
EP-46	PYRAN/MCPA LIME MILL/CRUSHER
EP-49	MCPA/SALP MIXER
EP-50	MCPA/SALP CONVEYOR
EP-52	MCPA/SALP FLUIDIZER
EP-53	CALCIUM PHOSPHATE PACKING
EP-54	CALCIUM PHOSPHATE BAGS
EP-61	MCP PACKING BIN
EP-62	SEMI-BULK BAG PACKING BIN
EP-63	STPP PACKING DUST COLLECTOR
EP-64	STP BIN VENT (WEST)
EP-66	STP BIN VENT (EAST)
EP-67	DCP SEMI-BULK
EP-68	D99 BAG PACKING BIN/DCP SEMI-BULK
EP-87	SODA ASH UNLOADING
EP-92	D20 SOUTH REACTOR
EP-93	D20 SOUTH MIXER
EP-94	D20 SOUTH MILL
EP-96	NEW BOILER #1
EP-98	SOUTH LIME SILO
EP-99	LIME PREMIX RECEIVING BIN

Emission Unit Label	Description
EP-100	PYRAN LIME SILO
EP-102	STPP PACKING BIN RECEIVER BIN VENT DC
EP-103	STPP SEMI-BULK FEED BIN VENT DC
EP-104	STPP TRANSFER SYSTEM VENTS
EP-105	TCP FINES DC
EP-106	KP DUST SCRUBBER SYSTEM
EP-107	KP DRYER SCRUBBER (WET END VESTIBULE SCRUBBER)
EP-108	KP REACTOR DEMISTER
EP-109	COOLING TOWER – OPEN WET
EP-110	TKPP TRUCK UNLOADING FILTER RECEIVER
EP-111	TKPP BAG DUMP STATION
EP-112	TKPP MIX TANK
EP-113	EMERGENCY GENERATOR

EMISSION UNITS WITHOUT LIMITATIONS

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

Emission Unit Label	Description
EP-04	CRUDE ACID TANK (AIP)
EP-09	ADJUSTING TANKS
EP-11	FUEL OIL TANKS (AIP)
EP-15	NO. 1,2,3 STPP DRYERS
EP-25	STPP REMELT SYSTEM
EP-30	MCP ROOTS BLOWER SYSTEM (AIP)
EP-31	MCP SEPARATOR (AIP)
EP-33	TCP REWORK TANK
EP-34	DCP PREMIX REACTOR A
EP-36	TCP/TMP WET MIX TANK
EP-38	TCP HOLD TANK
EP-41	NO. 5 TCP DRYER
EP-44	UNMILLED TCP PACKING
EP-47	MCPA LIME TRANSFER
EP-48	MCPA/SALP REACTOR
EP-51	MCPA STEAM GENERATOR
EP-55	PACKAGING VACUUM SYSTEM
EP-57	PHOSPHORIC ACID (H3PO4) TANK
EP-65	DEPT. 20 PACKING BIN
EP-70	STP OVERSIZE RECEIVER BIN
EP-71	STP MILL RECEIVER BIN

Emission Unit Label	Description
EP-72	SHMP PACKING (AIP)
EP-73	DCP WET MIX TANKS
EP-74	TSPP TANK
EP-75	ACID TANK 1
EP-76	ACID TANK 6
EP-78	ACID TANK 24
EP-79	ACID TANK 54 (75% ACID SHIPPING TANK)
EP-80	ACID TANK 51 (85% ACID SHIPPING TANK)
EP-81	ADJUSTING TANKS SUMP
EP-83	GASOLINE TANK
EP-85	MCPA/SALP FLUIDIZER BURNER [AIP]
EP-86	SULFURIC ACID TANK (AIP)
EP-89	ACID LOADING ROAD (PAVED)
EP-90	ACID SHIPPING TANK #60
EP-97	NAK PACKER VACUUM SYSTEM

DOCUMENTS RELIED UPON³

These documents have been relied upon in the development of this permit.

Permit Number	Description
94-10-100	DCP semi-bulk filler bin system
94-10-101	DCP bag packing bin system
94-10-102	MCP bag packing bin (Modified by Permit #07-10-021)
94-10-103	Semi-bulk packing bin
94-10-108	DCP recovery and premix dust collection system (EP-32)
94-10-109	Bin vent filter for STP dense phase system (Revised by Permit #99-02-014)
94-10-112	STP Packing (Replaced by Permit #07-04-006)
94-10-117	Calcium phosphate dust collection system (EP-54)
99-02-014 (Permit Matter)	Revision of Permit No. 94-10-109
01-06-018	Expansion to sodium aluminum phosphate process and addition of new boiler #1 (replaces Permit #00-07-038) (Replaced by Permit #01-06-018 PM)

³ The reader should refer to the Statement of Basis of this operating permit to view additional comments or actions related to changes made to previous construction permits.

Permit Number	Description
01-06-018 PM	Expansion to sodium aluminum phosphate process and addition of new boiler #1 (replaces Permit #01-06-018)
03-01-004	Modification of lime department
07-04-006	Addition of two new bin vent dust collectors to the sodium tripolyphosphate packaging transfer system (replaces permit 94-10-112)
07-10-021	Modification of Permit 94-10-102 (MCP Packing Bin EP-61)
07-12-025	Sodium tripolyphosphate bulk loading and transfer system modification (replaces permit 94-03-006)
09-01-003	Tricalcium phosphate grinder and air classifier
11-06-013	New potassium phosphate salts production unit in building #19 and tetrapotassium pyrophosphate (TKPP) solutions blending unit
072013-016	Activation of the North Lime Silo, EP-26

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 on the date of permit issuance.

The following requirements apply to all conditions in addition to any other requirements listed in the specific conditions, unless otherwise noted in the specific conditions.

Monitoring:

The permittee shall calibrate, maintain and operate all instruments and control equipment according to the manufacturer's recommendations or according to good engineering practices.

Unless otherwise noted, the emission total for a consecutive 12-month period shall mean: The total of the 12 monthly totals, ending with the month of interest; or, when there are less than 12 monthly totals available, the total of the monthly totals available, ending with the month of interest. A new limit or change of limit initiates a new rolling average period.

Record keeping:

The permittee shall record all required record keeping (i.e. inspections and corrective actions) in the appropriate format. The permittee may keep records electronically using database or workbook systems, as long as all required information is readily available for compliance determinations. The permittee's written inspection procedures shall be made available to department personnel upon request.

Reporting⁴:

- 1) The permittee shall report any exceedance of any of the terms imposed by this permit, or any malfunction which could cause an exceedance of any of the terms imposed by this permit, no later than ten (10) days after the exceedance or event causing the exceedance (unless otherwise specified in the specific condition), to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102
- 2) The permittee shall submit an annual certification⁵ 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. All deviations and Part 64 exceedances and excursions must be included in the compliance certifications. These certifications shall be submitted annually by **April 1st**, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to Environmental Protection Agency, Region 7, AWMD/APCO, 11201 Renner Boulevard, Lenexa, KS 66219, and the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102

⁴ Refer to General Permit Requirements, 10 CSR 10-6.065(6)(C)1.C General Record Keeping and Reporting Requirements, page 42, for additional details, including semi-annual reporting of monitoring data.

⁵ Refer to General Permit Requirements, 10 CSR 10-6.065(6)(C)3 Compliance Requirements, page 44, for more details.

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.

Visible Emissions Sources		
Emission Unit	Description	Collection Device
EP-14	STPP Reactor #1; STP Reactor #2; STP Premix and Mix Tank; STP Drum Dryer Feed Tank	CD-02: Centrifugal Collector
EP-16	No. 4 STPP Drum Dryer; No. 5 STP Drum Dryer; No. 6 STP Drum Dryer	CD-04: Rotoclone
EP-17	No. 7 STPP Drum Dryer; No. 8 STP Drum Dryer	CD-05: Rotoclone
EP-18	STP BRINKS	CD-06: Mist Eliminator
EP-19	STP Granular Silo #1; STP Granular Silo #2; STP Granular Silo #3; STP Granular Silo #4; STP Swecos; STP Separator; Put in Service in 1957	CD-07: Dust Collector
EP-22	STPP Bulk Loading System	CD-10: Dust Collector
EP-26	North Lime Silo	CD-74: Dust Collector
EP-32	TCP Rework System	CD-16: Dust Collector
EP-35	DCP MILL	CD-17: Dust Collector
EP-39	No. 1 & 2 TCP Drum Dryer (Steam Dryer)	CD-20: Water Spray
EP-40	No. 3 & 4 TCP Drum Dryer (Steam Dryer)	CD-21: Water Spray
EP-42	TCP Imp Mill	CD-23: Dust Collector
EP-43	TCP Packing Blender #1, TCP Packing Blender #2, TCP Packing Blender #3, TCP Bag Packing Feed Bin, TCP Bag Packer and TCP Tank Truck Loading	CD-24: Dust Collector
EP-45	Alumina Weigh Bin & Silo	CD-26: Dust Collector
EP-46	Pyran/MCPA Lime Mill (crusher)	CD-27: Dust Collector
EP-49	MCPA/SALP Mixer	CD-30: Dust Collector
EP-50	MCPA/SALP Cut-In Station (to mixer); MCPA/SALP Oversize Mill; MCPA/SALP Bin 30; MCPA/SALP Cut-In Station (to fluidizer); MCPA/SALP Bin 51; MCPA/SALP Cooler Screw; MCPA/SALP Packing Bin	CD-31: Dust Collector

Visible Emissions Sources		
Emission Unit	Description	Collection Device
EP-52	MCPA/SALP Fluidizer	CD-32: Dust Collector
EP-53	Pyran/SALP Screening (#1); Pyran/SALP Screening (#2); MCP Surge Bin #1; MCP Surge Bin #2; MCP Bulk Loading (tank trucks); DCP Surge Bin #1; DCP Surge Bin #2; DCP Bulk Loading (rail cars)	CD-33, CD-34, CD-35: Dust Collectors
EP-54	CALCIUM PHOSPHATE BAGS	CD-36: Dust Collector
EP-61	MCP PACKING BIN	CD-40: Dust Collector
EP-62	SEMI-BULK BAG PACKING BIN	CD-41: Dust Collector
EP-63	STP PACKING DUST COLLECTOR	CD-42: Dust Collector
EP-64	STP Bin Vent (West)	CD-43: Cartridge Filter Bin Vent
EP-66	STP Bin Vent (East)	CD 45, Cartridge Filter Bin Vent
EP-67	DCP SEMI-BULK	CD-46: Dust Collector
EP-68	D99 BAG PACKING BIN/DCP Semi-Bulk	CD-47: Dust Collector
EP-87	Soda Ash Unloading - Silo #1; Soda Ash Unloading - Silo #2	Vent Sock
EP-93	D20 SOUTH MIXER	CD-53: Dust Collector
EP-94	D20 SOUTH MILL	CD-54: Dust Collector
EP-96	NEW BOILER #1	Low NOx Burner with Flue Gas Recirculation
EP-98	SOUTH LIME SILO	CD-58: Dust Collector
EP-99	LIME PREMIX RECEIVING BIN	CD-59: Dust Collector
EP-100	PYRAN LIME SILO	CD-60: Dust Collector
EP-102	STPP Packing Bin Receiver Bin Vent	CD-62: Dust Collector
EP-103	STPP Semi-Bulk Feed Bin Vent	CD-63: Dust Collector
EP-104	STPP TRANSFER SYSTEM VENTS	CD-64: Dust Collector
EP-105	TCP FINES DC	CD-65: Dust Collector
EP-106	KP DUST SCRUBBER SYSTEM	CD-67: Wet Scrubber
EP-107	KP DRYER SCRUBBER (WET END VESTIBULE SCRUBBER)	CD-68: Ducon Wet Scrubber
EP-108	KP REACTOR DEMISTER	CD-69: Mist Eliminator

Visible Emissions Sources		
Emission Unit	Description	Collection Device
EP-109	COOLING TOWER – OPEN WET	CD-70: Drift Eliminator
EP-110	TKPP TRUCK UNLOADING FILTER RECEIVER	CD-71: Baghouse Dust Collector
EP-111	TKPP BAG DUMP STATION	Downdraft Table & Dust Cartridge Filter
EP-112	TKPP MIX TANK	Vent Filter

Permit Condition 1
 All Visible Emissions Sources (except EP-32, EP-54 and EP-66⁶)
 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants

Emission Limitations:

The permittee shall not discharge into the ambient air from any source, not exempted under 10 CSR 10-6.220, any air contaminant of opacity greater than twenty (20%) percent. A source with a 20% opacity limit may emit air contaminants with opacity over 20%, but not greater than 40% for an aggregate length of time not to exceed six (6) minutes in any 60 minutes. Where the presence of uncombined water is the only reason for failure of an emission to meet the opacity requirements, the opacity requirements shall not apply.

Monitoring / Record Keeping:

The permittee will follow the monitoring and record keeping requirements listed in Core Permit Requirements for 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants, starting on page 36.

Permit Condition 2
 EP-32
 10 CSR 10-6.060 Construction Permits Required
 City of St. Louis Local Construction Permit # 94-10-108

Emission Limitations:

- 1) The permittee shall not discharge into the ambient air from EP-32 visible emissions that exceed ten percent (10%) opacity for a period in excess of six minute in any consecutive 60 minute period. [\[Permit 94-10-108, Section D.\]](#)
- 2) Any emissions in excess of 40% opacity, regardless of time, are considered excessive emissions.

Monitoring / Record Keeping:

The permittee will follow the monitoring and record keeping requirements listed in Core Permit Requirements for 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants, starting on page 36.

⁶ These “except” emission units are covered by their own special conditions.

Permit Condition 3 EP-54 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permit 94-10-117

Emission Limitation:

- 1) The permittee shall not discharge into the ambient air from EP-54 visible emissions that exceed ten percent (10%) opacity for a period in excess of six minute in any consecutive 60 minute period. [Permit 94-10-117, Section II E.]
- 2) Any emissions in excess of 40% opacity, regardless of time, are considered excessive emissions.

Monitoring / Record Keeping:

The permittee will follow the monitoring and record keeping requirements listed in Core Permit Requirements for 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants, starting on page 36.

Permit Condition 4 EP-66 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permit 94-10-109, Revised by Permit Matter No. 99-02-014

Emission Limitation:

The permittee shall not discharge into the ambient air from EP-66 visible emissions that exceed ten percent (10%) opacity for a period in excess of six minutes in any consecutive sixty minute period. [Section II D.]

Monitoring / Record Keeping:

The permittee will follow the monitoring and record keeping requirements listed in Core Permit Requirements for 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants, starting on page 36.

KP Salts Production & TKPP Solutions Blending Units		
Emission Unit	Description	Collection Device
<i>EP-106</i>	KP DUST SCRUBBER SYSTEM	CD-67: Wet Scrubber
<i>EP-107</i>	KP DRYER SCRUBBER (WET END VESTIBULE SCRUBBER)	CD-68: Ducon Wet Scrubber
<i>EP-108</i>	KP REACTOR DEMISTER	CD-69: Mist Eliminator
<i>EP-109</i>	COOLING TOWER – OPEN WET	CD-70: Drift Eliminator
<i>EP-110</i>	TKPP TRUCK UNLOADING FILTER RECEIVER	CD-71: Baghouse Dust Collector
<i>EP-111</i>	TKPP BAG DUMP STATION	Downdraft Table & Dust Cartridge Filter
<i>EP-112</i>	TKPP MIX TANK	Vent Filter

Permit Condition 1
EP-106, EP-107, EP-110, EP-111, EP-112
10 CSR 10-6.400 Restriction of Emission of Particulate Matter From Industrial Processes

Emission Limitation:

The permittee shall operate CD-67, CD-68, downdraft table and cartridge filter and vent filter whenever the associated emission units are operating.⁷

Monitoring / Record Keeping:

The permittee shall keep maintenance logs, using Attachment D or its equivalent, Throughput and PM Emissions Tracking (refer to page 51), which shall include the following:

- 1) Incidents of malfunction with impact on emissions, duration of event, probable cause, and corrective action.
- 2) Maintenance activities, inspection schedule, repair actions, and replacements, etc.

Permit Condition 2
EP-106, EP-107, EP-108, EP-109, EP-110, EP-112
10 CSR 10-6.060 Construction Permits Required;
City of St. Louis Local Construction Permit # 11-06-013

Emission Limitation:

The permittee shall enclose, hard pipe and seal all pipes and ducts used to transfer product and capture and collect air and air contaminants from EP-106, EP-107, EP-108, EP-109, EP-110, EP-112 to achieve 100% capture of the emissions, with the exception of the KP Bag Dump Station openings where the bags are physically dumped into the equipment. [[Permit 11-06-013, Section III F.](#)]

Permit Condition 3
EP-106, EP-107, EP-108, EP-109, EP-110, EP-111, EP-112
10 CSR 10-6.060 Construction Permits Required;
City of St. Louis Local Construction Permit # 11-06-013

Emission Limitation:

- 1) The permittee shall not allow total emissions from EP-106, EP-107, EP-108, EP-109, EP-110, EP-111 and EP-112, in aggregate, to equal or exceed the following: [[Permit 11-06-013, Section II A.](#)]
 - a) 15 tons PM₁₀ per consecutive twelve (12)-month period, and
 - b) 10 tons PM_{2.5} per consecutive twelve (12)-month period.
- 2) The permittee shall operate, calibrate and maintain the emission units, emission control devices and monitoring instrumentation according to manufacturer's specifications and/or good engineering practices. [[Permit 11-06-013, Section III A.](#)]

Monitoring/Record Keeping:

- 1) The permittee shall monitor the operational parameters of the control devices used to reduce emissions from the potassium phosphate salts production unit as specified in the following Table. The acceptable range of each monitored parameter will be based on the parameters monitored during the initial performance test and the recommended range of acceptable operation from the manufacturer. [[Permit 11-06-013, Section III B.](#)]

⁷ For some of the emission units, this emission limit establishes a federal requirement for the Collection Device and thus provides an exemption from the pound per hour limit.

Emission Unit (Collection Device)	Monitored Parameter	Units	Frequency	Acceptable Range
EP-108 ⁸ (CD-69: Mist Eliminator)	N/A ⁹	N/A	N/A	N/A
EP-107 (CD-68: Ducon Wet Scrubber)	Liquor flow rate	Gallons per minute	Daily	>10
EP-106 (CD-67: Wet Scrubber)	Liquor flow rate	Gallons per minute	Daily	>10
EP-109 ¹⁰ (CD-70: Drift Eliminator)	N/A	N/A	N/A	N/A
EP-110 (CD-71: Baghouse Dust Collector)	Pressure drop	Inches of water column	Daily (when used)	0.5 - 20 ¹¹
EP-111 ¹² (Downdraft Table & Dust Cartridge Filter)	N/A	N/A	N/A	N/A
EP-112 ¹³ (Vent Filter)	N/A	N/A	N/A	N/A

- 2) The permittee shall inspect all components of the air pollution control equipment not subject to wear or plugging, including structural components, housing, ducts and hoods, every six months. The permittee shall keep logs, using Attachment D or its equivalent, Throughput and PM Emissions Tracking (refer to page 51). [[Permit 11-06-013, Section III C.](#)]
- 3) The permittee shall maintain records of weekly baghouse pressure drops using Attachment B, EP-110 Pressure Drop (refer to page 49).
- 4) The permittee will keep a record of the liquor flow rate as shown on Attachment I, Building 19 Operating Sheet, found on page 57.

Permit Condition 4
 EP-107
 10 CSR 10-6.060 Construction Permits Required;
 City of St. Louis Local Construction Permit # 11-06-013

Emission Limitation:

The permittee shall be limited to pipeline-grade natural gas for use in EP-107. [[Permit 11-06-013, Section II D.](#)]

⁸ Monitoring not required for these control devices since they are not required to meet regulatory emission limitations.

⁹ Not Applicable

¹⁰ Monitoring not required for these control devices since they are not required to meet regulatory emission limitations.

¹¹ This range is based on the values recorded during the January 21, 2014 performance test by NPN Environmental, where compliance was demonstrated.

¹² Monitoring not required for these control devices since they are not required to meet regulatory emission limitations.

¹³ Monitoring not required for these control devices since they are not required to meet regulatory emission limitations.

STPP Granular Bulk Loading		
Emission Unit	Description	Collection Device
EP-22	STPP Bulk Loading System	CD-10: Dust Collector

Permit Condition 1 EP-22 10 CSR 10-6.060 Construction Permits Required; City of St. Louis Local Construction Permit # 07-12-025
--

Emission Limitation:

1. Prior to loading, a loading sleeve and a suction hose will be placed into the railcar/truck opening to minimize fugitive emissions. [Permit 07-12-025, Section III A.]
2. The permittee shall install and operate the dust collectors at all times the source equipment is in operation to restrict the emission of particulate matter. To ensure proper function of the dust collectors, the permittee shall: [Permit 07-12-025, Section III C.]
 - a) Install instruments to monitor the operating pressure drop across the dust collectors.
 - b) All instruments and control equipment shall be calibrated, maintained, and operated according to the manufacturer's preventive maintenance recommendations.
 - c) The dust collector operating pressure drop shall be maintained between 0.5" to 6" of water column. The operator(s) shall check and record the pressure drop across the dust collector on a weekly basis.
 - d) The operator shall conduct and document a quarterly inspection and maintenance of the dust collector for structural component failures, for leaks and wear, and for the cleaning sequence of the dust collector.
 - e) If leaks or abnormal conditions are detected, the appropriate measures for remediation shall be implemented within eight (8) hours. Alternately, the facility shall document that the equipment was not in use during the time period between the detection of abnormal conditions and remediation if repairs cannot be accomplished within eight (8) hours of detection.
 - f) All inspections, corrective actions, and instrument calibrations shall be recorded.
 - g) Replacement filters shall be kept on hand at all times to replace defective filters. The filters shall be made of fibers appropriate for the operating conditions expected to occur.

Monitoring / Record Keeping:

- 1) The permittee shall keep records, using Attachment J or its equivalent, Example STPP Material Handlers Sheet (refer to page 58), which shall include the following:
 - a. At a minimum weekly pressure drop readings; [Permit 07-12-025, Section IV B.]
 - b. All dust collector inspections, and any actions resulting from the inspections;
 - c. All dates of filter replacement;
 - d. All dust collector instrumentation calibrations; and
 - e. Other maintenance and repair activities.
- 2) The permittee shall maintain records of any equipment malfunctions and corrective actions. [Permit 07-12-025, Section IV C.]

Lime Silo Group		
Emission Unit	Description	Collection Device
EP-26	North Lime Silo	CD-74: Dust Collector
EP-98	South Lime Silo	CD-58: Dust Collector
EP-99	Lime Pre-mix Receiver Bin	CD-59: Dust Collector
EP-100	Pyran Lime Silo	CD-60: Dust Collector

Permit Condition 1
 All Lime Silo Group
 10 CSR 10-6.060 Construction Permits Required;
 City of St. Louis Local Construction Permit # 03-01-004

Emission Limitation:

The permittee shall not emit more than 0.4 tons of PM₁₀ (particulate matter with nominal aerodynamic diameter of less than 10 micrometers) from the Lime Silo Group in any consecutive 12-month period. [Permit 03-01-004, Section II A.]

Record Keeping:

The permittee shall keep monthly records of PM₁₀ emissions, including a calculated total for every consecutive 12-month period of time using Attachment D, Throughput and PM Emissions Tracking (refer to page 51), or its equivalent to demonstrate compliance with this condition.

Permit Condition 2
 EP-98, EP-99, EP-100
 10 CSR 10-6.060 Construction Permits Required;
 City of St. Louis Local Construction Permit # 03-01-004

Emission Limitation¹⁴:

The permittee shall maintain the pressure drop across each Collection Device (CD58, CD-59 and CD-60), individually, in the range of 1 to 3 inches of water. [Permit 03-01-004, Section III A.1.]

Monitoring:

The permittee shall:

- 1) Check and document the baghouse pressure drop weekly.
- 2) Take corrective action within eight hours of abnormal conditions to return the pressure drop to normal.
- 3) Check the cleaning sequence of the baghouse quarterly.
- 4) Thoroughly inspect bags for leaks and wear quarterly.
- 5) Inspect every six months, all components that are not subject to wear or plugging, including structural components, housing, ducts and hoods. If leaks or abnormal conditions are detected, the appropriate measures for remediation shall be implemented within eight hours.
- 6) Document bag replacement.

Record Keeping:

The permittee shall maintain written or electronic records to verify compliance. These records shall include weekly baghouse pressure drops, all inspections and any action resulting from the inspections.

¹⁴ For some of the emission units, this emission limit establishes a federal requirement for the Collection Device and thus provides an exemption from the pound per hour limit.

The permittee shall use Attachments D, Throughput and PM Emissions Tracking (refer to page 51), and Attachment G, Example Building 2 Pressure Drop Log Sheet (refer to page 55), or their equivalent for this purpose.

<p>Permit Condition 3 EP-26 10 CSR 10-6.060 Construction Permits Required; City of St. Louis Local Construction Permit # 072013-016</p>

Emission Limitation¹⁵: [Permit 072013-016, Special Conditions 1.]

- 1) The permittee shall control emissions from the North Lime Silo, EP-26, using a baghouse (CD-74) as specified in the permit application.
- 2) The permittee shall operate and maintain the baghouse, CD-74, in accordance with the manufacturer's specifications.
- 3) The permittee shall equip the baghouse with a gauge or meter, which indicates the pressure drop across the control device.
- 4) The permittee shall keep replacement filters 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 / Record Keeping: [Permit 072013-016, Special Conditions 1.]

- 1) The permittee shall maintain a copy of the baghouse manufacturer's performance warranty on site.
- 2) The permittee's personnel shall read and document the pressure drop readings displayed by the instrumentation for the North Lime Silo sometime during the unloading process.
- 3) The permittee shall monitor and record the operating pressure drop across the baghouse, CD-74, at least weekly, if used. The permittee shall maintain the operating pressure drop within the design conditions specified by the manufacturer's performance warranty.
- 4) The permittee shall keep records, using Attachment G, Example Building 2 Pressure Drop Log Sheet (refer to page 55).
- 5) The permittee shall maintain an operating and maintenance log, using Attachment H or its equivalent, Example of maintenance activities tracking (refer to page 56), for the baghouse, CD-74, 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, etc.

¹⁵ For some of the emission units, this emission limit establishes a federal requirement for the Collection Device and thus provides an exemption from the pound per hour limit.

Tricalcium Phosphate Grinder and Air Classifier System		
Emission Unit	Description	Collection Device
<i>EP-105</i>	TCP FINES DC	CD-65: Dust Collector

Permit Condition 1 EP-105 10 CSR 10-6.060 Construction Permits Required; City of St. Louis Local Construction Permit # 09-01-003

Emission Limitation:

1. The CD-65 shall collect at least 99.9% of the material conveyed to it, releasing less than 0.1% of material processed by this equipment to the atmosphere. [Permit 09-01-003, Section II A.]
2. The permittee shall install, operate and maintain CD-65 in accordance with the manufacturer's installation, operation and maintenance manual. [Permit 09-01-003, Section III B.]
3. The permittee shall operate CD-65 using only the filter media used during the most recent source test that demonstrates compliance. If the filter media becomes unavailable, the permittee may use an equivalent material for up to 180 days. The permittee shall perform source tests within the 180-day period to confirm compliance with Emission Limit 1. The permittee shall use the procedures specified in the current United States Environmental Protection Agency (USEPA) guidance for testing PM₁₀ and PM_{2.5} emissions. [Permit 09-01-003, Section III C.]

Monitoring / Record Keeping: [Permit 09-01-003, Section IV A.-B.]

- 1) The permittee shall keep records of all emission tests conducted on the permitted equipment. These records must include the operating parameters of CD-65 and the filter media installed in CD-65 at the time of the test. All test results must be retained for the life of the equipment.
- 2) The permittee shall maintain documentation of the following:
 - a. The manufacturer's installation, operation and maintenance manual for CD-65 must be retained for the life of the equipment.
 - b. All filter replacement in CD-65 including the type of filter media installed.
 - c. The permittee shall maintain an operating and maintenance log, using Attachment H or its equivalent, Example of maintenance activities tracking (refer to page 56), for CD-65, including but not limited to all actions required by the manufacturer's installation, operation and maintenance manual.

Boiler Group		
Emission Unit	Description	Collection Device
<i>EP-13</i>	No. 2 Boiler; 65.7 mmBtu per hour boiler primary fuel: natural gas; Installed 1963	None
<i>EP-96</i>	New Boiler No. 1; 93 mmBtu per hour boiler primary fuel: natural gas; Nebraska Boiler Co. Installed 2001	Low NO _x Burner with Flue Gas Recirculation

Permit Condition 1
 Boiler Group
 10 CSR 10-6.060 Construction Permits Required
 City of St. Louis Local Construction Permit # 01-06-018PM

Emission Limitation:

The permittee shall not exceed 39 tons combined NO_x emissions from the *Boiler Group* in any consecutive twelve-month period.

Monitoring/Record Keeping:

1. The permittee shall calculate the amount of NO_x emissions generated from the *Boiler Group* monthly.
2. The permittee shall be keep the emission totals of every consecutive twelve-month period, using 100 for EP-13 and 32 for EP-96, both expressed in pounds of NO_x per million cubic feet of natural gas as emission factors¹⁶. Please refer to Attachment K, Example Daily Fuel Readings, on page 59.
3. The permittee will receive approval from the department prior to using emission factors other than those listed in number 2., above.

¹⁶ Selected WebFIRE Factors
 01 Jan 2015

SCC i	10200602		
Level 1 i	External Combustion Boilers		
Level 2 i	Industrial		
Level 3 i	Natural Gas		
Level 4 i	10-100 Million Btu/hr		
POLLUTANT i	Nitrogen oxides (NO _x)	NEI NOX i	CAS i
Primary Control i	UNCONTROLLED		

Emission Factor [i](#) 1.000E2 Lb per Million Cubic Feet Natural Gas Burned
Quality [i](#) B [Emissions Factors Applicability](#)

Notes Expressed as NO₂.

Primary Control [i](#) FLUE GAS RECIRCULATION
 Secondary Control LOW NOX BURNERS

Emission Factor [i](#) 3.200E1 Lb per Million Cubic Feet Natural Gas Burned
Quality [i](#) C [Emissions Factors Applicability](#)

References EPA. March, 1998. Section 1.4, Natural Gas Combustion. In: Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Fifth Edition, AP-42, Supplement D. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. Research Triangle Park, North Carolina.

AP 42 [Chapter 1](#) [Section 1.4](#)

Section
 Formula

Notes Expressed as NO₂. For large and small wall-fired boilers with SNCR control, apply a 24% reduction to the appropriate NO_x emission factor. For tangential-fired boilers with SNCR control apply a 13% reduction to the appropriate NO_x emission factor.

Calcium Phosphate Packing		
Emission Unit	Description	Collection Device
<i>EP-54</i>	DCP Auto Packers, MCP/Pyran/SALP Auto Packers	CD-36, dust collector

Calcium Phosphate Packing Permit Condition 1 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permit 94-10-117 10 CSR 10-6.400 Restrictions of Emissions of PM from Industrial Processes

Emission Limitation:

1. The Dust Collection System shall be operating prior to any packing or palletizing operations depicted on the process flow diagram in the construction permit application dated December 1, 1994. (Refer to Attachment N, Flow Diagram/Schematic for Cut-In & Premix, on page 66) [\[Permit 94-10-117, Section II A.\]](#)
2. The concentration of particulate matter shall not exceed 0.033 grains per dry standard cubic feet (dscfm) of exhaust gases¹⁷. [\[Permit 94-10-117, Section II B.\]](#)
3. The Calcium Phosphate Dust Collection System (CD-36) shall be maintained in good operating condition. [\[Permit 94-10-117, Section II F.\]](#)

Monitoring:

1. Maintenance/preventative maintenance shall be done on the dust collector and maintenance records shall be kept. [\[Permit 94-10-117, Section II G.\]](#)
2. The dust collector (CD-36) shall be maintained such that the pressure drop remains in the normal operating range of two (2) to eight (8) inches of water whenever the emission units are in operation.
3. All instruments and control equipment shall be calibrated, maintained, and operated according to the manufacturer's specifications and recommendations or good engineering practice.
4. Check and document the dust collector pressure drop weekly. If the pressure drop falls out of the normal operating range, corrective action shall be taken within eight hours to return the pressure drop to normal.
5. Check and document the cleaning sequence of the dust collector every six months.
6. Inspect bags for leaks and wear every six months.
7. Inspect all components that are not subject to wear or plugging, including structural components, housing, ducts and hoods every six months.

Record Keeping:

1. The owner or operator of the Calcium Phosphate Dust Collection System must keep records of the maintenance records for the dust collector. The permittee shall use Attachment H, Example of maintenance activities tracking, on page 56, or its equivalent. [\[Permit 94-10-117, Section III A.1\]](#)
2. The permittee shall document all pressure drop readings (see Attachment E, Example Calcium Packing and Magnet Checklist, on page 53).

MCP & STP Packing		
Emission Unit	Description	Collection Device
<i>EP-61</i>	MCP Packing Bin	CD-40, dust collector
<i>EP-62</i>	MCP Semi-Bulk Packing Bin	CD-41 dust collector

¹⁷ This is a voluntary limit.

MCP & STP Packing		
Emission Unit	Description	Collection Device
<i>EP-63</i>	STP Packer	CD-42 dust collector

Permit Condition 1 EP-61, EP-62 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permits 94-10-102 and 94-10-103

Emission Limitations:

- The permittee shall not exceed the following throughput limitations, particulate matter emission limitations, or fall below the Collection Device efficiencies:

Source Name	Maximum Annual Throughput (tons/year)	Collection Device Efficiency	Maximum Controlled Annual Emissions (tons PM/year)
EP-61	N/A	99.9%	0.011
EP-62	4400	99.9%	0.0151

- The Collection Devices (CD-40 and CD-41) shall be on line and operating while sources are in operation. [\[Permits 94-10-102 & 103, Section II A.\]](#)

Monitoring

- The dust collectors (CD-40 and CD-41) shall be maintained such that the pressure drop remains in the normal operating range of two (2) to eight (8) inches of water whenever the emission units are in operation.
- All instruments and control equipment shall be calibrated, maintained, and operated according to the manufacturer's specifications and recommendations.
- Check and document the dust collector pressure drop weekly. If the pressure drop falls out of the normal operating range, corrective action shall be taken within eight hours to return the pressure drop to normal.
- Check and document the cleaning sequence of the dust collector every six months.
- Inspect bags for leaks and wear every six months.
- Inspect all components that are not subject to wear or plugging, including structural components, housing, ducts and hoods every six months.

Record Keeping:

- Accurate, easily understandable, readily available, up-to-date records must be kept for a minimum of five years, to verify all construction permit conditions including the following (see Attachment D, Throughput and PM Emissions Tracking, page 51): [\[Permits 94-10-102 & 103, Section II C.\]](#)
 - PM Emissions
 - Operating Parameters
 - Control efficiencies
 - Throughput
- Maintenance records of all Collection Devices must be kept (see Attachment H, Example of maintenance activities tracking, on page 56, or its equivalent). [\[Permits 94-10-102 & 103, Section II D.\]](#)
- The permittee shall document all pressure drop readings (see Attachment E, Example Calcium Packing and Magnet Checklist, on page 53).

4. All inspections, corrective actions, and instrument calibration shall be recorded (see Attachment H).

Permit Condition 2 EP-63 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permits 07-04-006
--

Emission Limitations:

The permittee shall operate CD-42 to restrict the emission of particulate matter. To ensure proper function of CD-42, the following shall be done: [Permits 07-04-006, Section III A.]

1. The permittee must operate CD-42 whenever the *STPP Packaging Transfer System* is in operation.
2. The permittee must install instruments to monitor the operating pressure drop across the dust collector.
3. The permittee shall calibrate, maintain and operate all instruments and CD-42 according to the manufacturer's preventive maintenance recommendations.
4. The permittee shall maintain CD-42 operating pressure drop between one-half (0.5) to six (6) inches of water column. If the pressure drop falls out of the normal operating range, the permittee shall take corrective action within eight (8) hours to return the pressure drop to normal.
5. The permittee shall keep replacement filters on hand at all times to replace defective filters. The filters shall be made of fibers appropriate for the operating conditions expected to occur.
6. If leaks or abnormal conditions are detected, the permittee shall implement appropriate measures for remediation within eight (8) hours.

Monitoring

1. The permittee shall check and record the pressure drop across CD-42 on a weekly basis.
2. The permittee shall conduct and document a quarterly inspection and maintenance of CD-42 for structural component failures, for leaks and wear, and for the cleaning sequence of the baghouse.

Record Keeping:

1. The permittee shall document all pressure drop readings (see Attachment J, Example STPP Material Handlers Sheet, on page 58). [Permits 07-04-006, Section III A.]
2. All inspections, corrective actions, and instrument calibration shall be recorded (see Attachment H, Example of maintenance activities tracking, on page 56, or its equivalent). [Permits 07-04-006, Section III A.]
3. The permittee shall document that CD-42 was not in use during the time period between the detection of abnormal conditions and remediation (refer to Emission Limitation 6. above).

STPP Packaging Transfer System		
Emission Unit	Description	Collection Device
<i>EP-102</i>	STPP 50 LB PACKING BIN RECEIVER	CD-62, bin vent dust collector, ID#0318
<i>EP-103</i>	STPP SEMI-BULK FEED RECEIVER	CD-63, bin vent dust collector, ID#0319

<p>Permit Condition 1 EP-63 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permits 07-04-006</p>
--

Emission Limitations:

The permittee shall operate CD-62, CD-63 to restrict the emission of particulate matter. To ensure proper function of CD-62, CD-63, the following shall be done: [\[Permits 07-04-006, Section III A.\]](#)

1. The permittee must operate CD-62, CD-63 whenever the *STPP Packaging Transfer System* is in operation.
2. The permittee must install instruments to monitor the operating pressure drop across the dust collector.
3. The permittee shall calibrate, maintain and operate all instruments and CD-62, CD-63 according to the manufacturer's preventive maintenance recommendations.
4. The permittee shall maintain CD-62, CD-63 operating pressure drop between one-half (0.5) to six (6) inches of water column. If the pressure drop falls out of the normal operating range, the permittee shall take corrective action within eight (8) hours to return the pressure drop to normal.
5. The permittee shall keep replacement filters on hand at all times to replace defective filters. The filters shall be made of fibers appropriate for the operating conditions expected to occur.
6. If leaks or abnormal conditions are detected, the permittee shall implement appropriate measures for remediation within eight (8) hours.

Monitoring

1. The permittee shall check and record the pressure drop across CD-62, CD-63 on a weekly basis.
2. The permittee shall conduct and document a quarterly inspection and maintenance of CD-62, CD-63 for structural component failures, for leaks and wear, and for the cleaning sequence of the baghouse.

Record Keeping:

1. The permittee shall document all pressure drop readings (see Attachment J, Example STPP Material Handlers Sheet, on page 58). [\[Permits 07-04-006, Section III A.\]](#)
2. All inspections, corrective actions, and instrument calibration shall be recorded (see Attachment H, Example of maintenance activities tracking, on page 56, or its equivalent). [\[Permits 07-04-006, Section III A.\]](#)
3. The permittee shall document that CD-62, CD-63 was not in use during the time period between the detection of abnormal conditions and remediation (refer to Emission Limitation 6. above).

DCP Packing		
Emission Unit	Description	Collection Device
<i>EP-67</i>	DCP Semi-Bulk Packing Bin	CD-46, dust collector

DCP Packing		
Emission Unit	Description	Collection Device
<i>EP-68</i>	DCP Packing Bin	CD-47, dust collector

Permit Condition 1 DCP Packing 10 CSR 10-6.060 Construction Permits Required City of St. Louis Local Construction Permits 94-10-100 & 94-10-101 10 CSR 10-6.400 Restrictions of Emissions of PM from Industrial Processes

Emission Limitation:

1. The through put of emission unit EP-68 shall be limited as requested in the construction permit application as follows:
 - a) 3250 tons per year of DCP (anhydrous). [\[94-10-101 Section II\]](#)
 - b) 6520 tons per year of DCP (dihydrate). [\[94-10-101 Section II\]](#)
2. The through put of emission unit EP-67 shall be limited as requested in the construction permit application as follows:
 - a) 1150 tons per year of DCP (anhydrous). [\[94-10-100 Section II\]](#)
 - b) 7650 tons per year of DCP (dihydrate). [\[94-10-100 Section II\]](#)
3. The permittee shall not exceed the following Collection Device efficiencies and particulate matter emission limitations:

Source Name	Process Material	Collection Device Efficiency	Maximum Controlled Annual Emissions
EP-68	DCP (anhydrous)	99.7%	101.8 lb/yr (0.0509 ton/yr)
EP-68	DCP (dihydrate)	99.7%	15.2 lb/yr (0.0076 ton/yr)
EP-67	DCP (anhydrous)	99.7%	91.8 lb/yr (0.0459 ton/yr)
EP-67	DCP (dihydrate)	99.7%	13.8 lb/yr (0.0069 ton/yr)

4. The Collection Devices (CD-46 & CD-47) shall be on line while the source is in operation. [\[94-10-100 & 94-10-101 Section III A.\]](#)
5. All equipment shall be operated and maintained using the manufacturer's instructions. [\[94-10-100 & 94-10-101 Section III B.\]](#)

Monitoring

1. The dust collectors (CD-46 & CD-47) shall be maintained such that the pressure drop remains in the normal operating range of two (2) to eight (8) inches of water whenever the emission units are in operation.
2. All instruments and control equipment shall be calibrated, maintained, and operated according to the manufacturer's specifications and recommendations.
3. Check and document the dust collector pressure drop weekly. If the pressure drop falls out of the normal operating range, corrective action shall be taken within eight hours to return the pressure drop to normal.
4. Check and document the cleaning sequence of the dust collector every six months.

5. Inspect bags for leaks and wear every six months.
6. Inspect all components that are not subject to wear or plugging, including structural components, housing, ducts and hoods every six months.

Record Keeping:

1. Accurate, easily understandable, readily available, up-to-date records shall be kept of the throughput, emissions and operating parameters. These records shall be kept as rolling 12-month totals indicating production during the previous 12 months. The permittee shall use Attachment D, Throughput and PM Emissions Tracking (refer to page 51), for this purpose. [94-10-100 & 94-10-101 Section IV A.]
2. Maintenance records of the Collection Devices shall be kept. The permittee shall use Attachment H, Example of maintenance activities tracking (refer to page 56), for this purpose. [94-10-100 & 94-10-101 Section IV B.]
3. The permittee shall document all pressure drop readings. The permittee shall use Attachment E, Example of maintenance activities tracking (refer to page 56), for this purpose.
4. All inspections, corrective actions, and instrument calibration shall be recorded using Attachment H, Throughput and PM Emissions Tracking (refer to page 51).

SALP		
Emission Unit	Description	Collection Device
<i>EP-92</i>	D20 South Reactor (SALP)	CD-52, Rotoclone
<i>EP-93</i>	D20 South Mixer (SALP), D20 South Cut-In Station (SALP)	CD-53, Dust Collector
<i>EP-94</i>	D20 South Mill (SALP), D20 South Screening Unit (SALP)	CD-54, Dust Collector

Permit Condition 1
 All SALP Milling
 10 CSR 10-6.060 Construction Permits Required
 City of St. Louis Local Construction Permit 01-06-018
 City of St. Louis Local Construction Permit 01-06-018PM

Emission Limitation:

The emissions from EP-92, EP-93 and EP-94 are limited to no more than 0.97 tons of PM₁₀ in any consecutive 12-month period. [Permit 01-06-018PM, Section II A.]

Monitoring/Record Keeping:

1. The permittee shall operate EP-92, EP-93 and EP-94 only if the following Collection Devices are in operation: south mill dust collector (CD-54), south mixer dust collector (CD-53) and south reactor rotoclone (CD-52). To ensure proper function, periodic monitoring shall be performed as follows: [Permit 01-06-018PM, Section III A.]
 - a) Check and document the pressure drop for the dust collectors (CD-53 and CD-54) and the water flow for the rotoclone (CD-52) weekly. If these parameters are not within the normal operating ranges listed below, then corrective action shall be taken within eight hours to return the parameters to within normal operating range. [Permit 01-06-018PM, Section III A.1]
 - i) Two (2) to eight (8) inches of water pressure drop for the dust collectors (CD-53 and CD-54).
 - ii) a minimum of 2.9 gallons per minute of water flow to the rotoclone (CD-52).

- b) Check the cleaning sequence of the two dust collectors (CD-53 and CD-54) semi-annually. [Permit 01-06-018PM, Section III A.2]
 - c) Thoroughly inspect cartridges for leaks and wear semi-annually. Cartridge replacement shall be documented. [Permit 01-06-018PM, Section III A.3]
 - d) Inspect all components that are not subject to wear or plugging, including structural components, housings, ducts and hoods semi-annually. [Permit 01-06-018PM, Section III A.4]
 - e) If leaks or abnormal conditions are detected, the appropriate measures for remediation shall be implemented within eight hours. [Permit 01-06-018PM, Section III A.5]
2. The permittee shall calculate the amount of PM₁₀ emissions generated from EP-92, EP-93 and EP-94 monthly. Emission totals of every consecutive 12-month period shall be kept. The emission factor for the south reactor can be found in Attachment L, EP-92, EP-93 & EP-94 Emission Factors (refer to page 60). The emission factor for the south mixer and south mill shall be determined from the results of the of the south mixer performance test. [Permit 01-06-018PM, Section IV A.] The permittee will receive approval from the department prior to using emission factors other than the ones listed in Attachment L. [Permit 01-06-018PM, Section IV C.]
 3. The permittee shall maintain monthly records of EP-92, EP-93 and EP-94 throughput from the south reactor and the hours of operation for the south mixer and south mill dust collectors (see Attachment D, Throughput and PM Emissions Tracking). [Permit 01-06-018PM, Section IV D.]
 4. The permittee shall maintain a written record of the inspections, pressure drop, water flow and maintenance for the south reactor rotoclone (CD-52), south mill dust collector (CD-54) and south mixer dust collector (CD-53) as well as any action resulting from the inspections (see Attachment F, Example Department 20 Checklist, and Attachment H, Example of maintenance activities tracking). [Permit 01-06-018PM, Section IV E.]

Emergency Generator		
Emission Unit	Description	Collection Device
<i>EP-113</i>	emergency generator, 12-hp natural gas-fired emergency generator, Kohler (Model 10RM61), constructed 1983, 9 kW / 12.1 hp	N/A

Permit Condition 1 EP-113 10 CSR 10-6.070 New Source Performance Regulations 40 CFR Part 63, MACT Subpart ZZZZ —National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Emission Limitation:¹⁸

Work Practice Requirements [§63.6603]

- 1) Change oil and filter every 500 hours of operation or annually, whichever comes first; [Table 2d, 5a]
- 2) Inspect spark plugs every 1000 hours of operation or annually, whichever comes first, and replace as necessary; [Table 2d, 5b] and
- 3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [Table 2d, 5c]

¹⁸ For a more detailed description of the Subpart ZZZZ supplied by the applicant, refer to Attachment M, Existing Emergency SI RICE at an Area Source, found on page 62.

Startup Period Requirements [§63.6603]

Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which the time the non-startup emission limitations apply.¹⁹ [Table 2d]

Testing and Initial Compliance Requirements

- 1) Install a non-resettable hour meter if one is not already installed. [§63.6625(f)]
- 2) Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d of this subpart apply. [§63.6625(h)]

Continuous Compliance [§63.6640(a)]

Demonstrate continuous compliance with each operating limitation according to methods specified in Table 6. Comply with work or management practices. [Table 6, 9]

- 1) Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or
- 2) Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

In order for the engine to be considered an emergency stationary RICE, any operation other than emergency operation, maintenance and testing, emergency demand response and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. [§63.6640(f)]

Reporting:

The permittee must report each instance in which you did not meet each operating limitation in Table 2d. Report each instance in which you did not meet the requirements in Table 8 that apply to you. The permittee must report all deviations as defined in this subpart in the semiannual monitoring report [§63.6640(b) and (e), §63.6650(f)]

Record Keeping:

The permittee must keep the following records:

- 1) Records of all required maintenance performed of the air pollution control and monitoring equipment. [§63.6655(a)(4)]
- 2) Keep records to show continuous compliance with each operating limitation that applies by [§63.6655(d), §63.6640(a), and Table 6]:

¹⁹ If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

- a) Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or
 - b) Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
- 3) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan. [§63.6655(e)]
 - 4) Keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [§63.6655(f)]

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 10-5.060 Refuse Not to be Burned in Fuel Burning Installations (Contained in State Implementation Plan)

No person shall burn or cause or permit the burning of refuse in any installation which is designed for the primary purpose of burning fuel.

St. Louis City Ordinance 68657 Section 6 & Section 15 – Open Burning Restrictions²⁰

Section Six. *Definitions*

This Section defines key words and expressions used in the Ordinance. The following definitions are in addition to those contained in State Rule 10 CSR 10-6.020, as amended.

23. Open Burning - The burning of any matter in such manner that the products of combustion resulting from the burning are emitted directly into the ambient air without passing through an approved stack, duct, vent or chimney.

29. Refuse - Any combustible waste material containing carbon in a free or combined state, other than liquids or gases.

30. Salvage Operation - Any business, trade, industry or other activity conducted in whole or in part for the purpose of salvaging or reclaiming any product or material including but not limited to metals or chemicals.

34. Trade Waste - Solid, liquid, or gaseous material resulting from construction or the prosecution of any business, trade or industry, or any demolition operation including but not limited to wood, plastics, cartons, grease, oil, chemicals and cinders.

36. Vegetation - Any representative of the plant kingdom including, but not limited to trees, shrubs, grasses, or vegetables, and any anatomical part of these plants including but not limited to leaves, stems, roots, flowers or fruits.

Section Fifteen: *Open Burning Restrictions.*

A. No person shall cause, suffer, allow, or permit the open burning of refuse.

B. No person shall conduct, cause or permit the conduct of a salvage operation by open burning.

C. No person shall conduct, cause or permit the disposal of trade waste by open burning.

D. No person shall cause or permit the open burning of leaves, trees or the byproducts there from, grass, or other vegetation.

E. It shall be prima-facie evidence that the person who owns or controls property on which open burning occurs, has caused or permitted said open burning.

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

²⁰ This ordinance is a part of the Missouri state implementation plan, and as such, is federally enforceable.

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) Refer to the regulation for a complete list of allowances. The following is a listing of exceptions to the allowances:
- (A) St. Louis metropolitan area. The open burning of household refuse is prohibited
 - (B) Yard waste: St. Louis metropolitan area. The open burning of trees, tree leaves, brush or any other type of vegetation is prohibited in incorporated municipalities including the City of St. Louis.

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) Best 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 list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, 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, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
- 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. [10 CSR 10-6.065(6)(B)1.A(V)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065(6)(C)1.C(II)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request. [10 CSR 10-6.065(6)(C)3.B]

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

- 1) 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.
- 2) The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

10 CSR 10-6.100 Alternate Emission Limits

Proposals for alternate emission limitations shall be submitted on Alternate Emission Limits Permit forms provided by the department. An installation owner or operator must obtain an Alternate Emission Limits Permit in accordance with 10 CSR 10-6.100 before alternate emission limits may become effective.

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

- 1) The permittee shall submit 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) The permittee may be required by the director to file additional reports.
- 3) 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.
- 4) 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.

- 5) The fees shall be payable to the Department of Natural Resources and shall be accompanied by the emissions report.
- 6) The permittee shall complete required reports on state supplied EIQ forms or electronically via MoEIS. Alternate methods of reporting the emissions can be submitted for approval by the director. The reports shall be submitted to the director by April 1 after the end of each reporting year. If the full emissions report is filed electronically via MoEIS, this due date is extended to May 1.
- 7) The reporting period shall end on December 31 of each calendar year. Each report shall contain the required information for each emission unit for the twelve (12)-month period immediately preceding the end of the reporting period.
- 8) The permittee shall collect, record and maintain the information necessary to complete the required forms during each year of operation of the installation.

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 10-6.170

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 schedule²¹:

- 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 the visible emissions were normal for the installation.
- 3) Whether equipment malfunctions contributed to an exceedance.
- 4) 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 10-5.040 Use of Fuel in Hand-Fired Equipment Prohibited

It shall be unlawful to operate any hand-fired fuel-burning equipment in the St. Louis, Missouri metropolitan area. This regulation shall apply to all fuel-burning equipment including, but not limited to, furnaces, heating and cooking stoves and hot water furnaces. It shall not apply to wood-burning fireplaces and wood-burning stoves in dwellings, nor to fires used for recreational purpose, nor to fires used solely for the preparation of food by barbecuing. Hand-fired fuel-burning equipment is any stove,

²¹ The reissuance of this operating permit will not affect the frequency of monitoring. The permittee may continue their current monitoring schedule-for all affected emission units.

furnace, or other fuel-burning device in which fuel is manually introduced directly into the combustion chamber.

**10 CSR 10-5.060 Refuse Not to be Burned in Fuel Burning Installations
(Contained in State Implementation Plan)**

No person shall burn or cause or permit the burning of refuse in any installation which is designed for the primary purpose of burning fuel.

10 CSR 10-5.120 Information on Sales of Fuels to be Provided and Maintained

Every delivery of coal or residual fuel oil when first delivered to a consumer or wholesaler in the St. Louis metropolitan area must be accompanied by a ticket prepared in triplicate and containing at least the name and address of the seller and the buyer; the grade of fuel; ash content of coal, the source of the fuel, which must be an approved source, and such other information as the Air Conservation Commission may require. One copy of each ticket shall be kept by the person delivering the fuel and be retained for one year; one copy is to be given to the recipient of the fuel to be retained for one year; and, upon request, within 30 days after delivery of the fuel, the delivering party shall mail one copy to the Air Conservation Commission.

10 CSR 10-6.165 Restriction of Emission of Odors

This requirement is not federally enforceable.

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 10-5.240 Additional Air Quality Control Measures May be Required When Sources Are Clustered in a Small Land Area

The Air Conservation Commission may prescribe more restrictive air quality control requirements that are more restrictive and more extensive than provided in regulations of general application for:

- 1) Areas in which there are one or more existing sources and/or proposed new sources of particulate matter in any circular area with a diameter of two miles (including sources outside metropolitan area) from which the sum of particulate emissions allowed from these sources by regulations of general application are or would be greater than 2000 tons per year or 500 pounds per hour.
- 2) Areas in which there are one or more existing sources and/or proposed new sources of sulfur dioxide in any circular area with a diameter of two miles from which the sum of sulfur dioxide emissions from these sources allowed by regulations of general application are or would be greater than 1000 tons for any consecutive three months or 1000 pounds per hour.

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

Emission Limitation:

No owner or other person shall cause or permit to be discharged into the atmosphere from any source 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 should note the visible emissions performance of the plant according to the schedule outlined in 2) below. Specifically, the source would first conduct a quick survey of the entire plant. The permittee must maintain a log noting whether any air emissions (except for water vapor) were visible from the plant, all emission points from which visible emissions occurred, and whether the visible emissions were normal for the process. If the permittee observes no visible or other significant emissions then no further observations would be required at this time.

For those emission points with visible emissions perceived or believed to be above the normal opacity level, the permittee should record a formal Method 9 reading for the emission points of concern. Whether recording “qualitative” visible emission characteristics or taking Method 9 readings, the permittee should also document the total duration of any visible emission incident as part of the log.

Where the permittee opts to record “qualitative” visible emissions data, rather than record official Method 9 readings, it may be prudent for the source to bring in a certified Method 9 observer to periodically “quantify” visible emissions. These periodic Method 9 readings along with the survey results would give the responsible official some reasonable assurance that the source is meeting its opacity obligations.

In all cases, the permittee shall insure that all persons responsible for making visible emission observations acquire basic training in the general principles and practices of “reading” opacity. At a minimum, the observers should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water. EPA’s Reference Method 22, found at 40 CFR Part 60, Appendix A, suggests two references in Section 7 that may be helpful.

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 at that time. 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 schedule²²:
 - 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.

²² The reissuance of this operating permit will not affect the frequency of monitoring. The permittee may continue their current monitoring schedule-for all affected emission units.

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. Each individual who works in asbestos abatement projects must first obtain certification for the appropriate occupation from the department. Each person who offers training for asbestos abatement occupations must first obtain accreditation from the department. Certain business entities that meet the requirements for state-approved exemption status must allow the department to monitor training classes provided to employees who perform asbestos abatement.

Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone

- 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 §82.106.
 - b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
 - c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
 - d) No person may modify, remove, or interfere with the required warning statement except as described in §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:
 - a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
 - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.

- c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
 - d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
 - e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §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 §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 as specified 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*

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 by a permittee:
 - 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"; or

- 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.

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

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.

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, 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.
 - iii) Exception. Monitoring requirements which require reporting more frequently than semi annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
 - 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. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. 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)

The permittee shall comply with the requirements of 40 CFR Part 68, Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by 40 CFR Section 68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 no later than the latest of the following dates:

- 1) June 21, 1999;
- 2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or
- 3) The date on which a regulated substance is first present above a threshold quantity in a process.

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, 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, 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, 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 application, 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 written notice of the change to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, no later than the next annual emissions report. This

notice shall not be required for changes that are insignificant activities under 10 CSR 10-6.065(6)(B)3. 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 Bret D. Graham, Plant Manager. 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 A

Visible Emissions Monitoring Observations

Combined Form for Compliance with 10 CSR 10-6.170 and 10 CSR 10-6.220 Monitoring Requirements

Date	Time	No Visible Emissions Observed*	Visible Emissions Observed ²³								Initials
			Fugitive Emissions (F.E.)		Direct Emissions (D.E. – from vent or stack)			F.E. Beyond Boundary or Greater Than Normal D.E.			
			Beyond Boundary?		Emission Source	Normal	Less Than	Greater Than	Cause	Corrective Action	
			Yes	No							

²³ Other than uncombined water

Attachment C

Method 9 Opacity Emissions Observations								
Company					Observer			
Location					Observer Certification Date			
Date					Emission Unit			
Time					Collection 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 _____

	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
Total Monthly PM10 (Tons)	7,850	7,850	7,850	7,850	7,850	7,850	7,850	7,850	7,850	7,850	7,850	7,850
Total Monthly PM10 (Lbs)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Rolling 12-Month Total PM10 (Tons)	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	0.00000	0.00000	0.00000
Rolling 12-Month Total PM10 (Lbs)	0.0459	0.0459	0.0459	0.0459	0.0459	0.0459	0.0459	0.0459	0.0459	0.0459	0.0459	0.0459
Total Monthly PM10 (Tons)	0.00003	0.00000	0.00002	0.00004	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00001
Rolling 12-Month DCDC Total PM10 (Tons)	0.0002	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Rolling 12-Month DCDC Total PM10 (Lbs)	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069	0.0069
EP 68 - D99 Bag Packer (Tons)	272	169	44	227	10	90	27	189	89	170	252	248
Total Monthly PM10 (Lbs)	203	169	0	0	1	22	27	107	8	0	77	132
Rolling 12-Month Total PM10 (Tons)	88	0	44	227	9	68	0	77	89	170	122	116
Rolling 12-Month Total PM10 (Lbs)	2,289	2,259	2,075	2,205	1,620	1,745	1,871	1,818	1,611	1,758	1,622	1,781
Total Monthly PM10 (Tons)	1,188	1,314	1,228	1,186	792	814	839	920	734	732	722	738
Rolling 12-Month DCDC Total PM10 (Tons)	994	848	750	977	985	888	820	896	877	1,028	1,046	988
Annual Target Total (Tons)	9,770	9,770	9,770	9,770	9,770	9,770	9,770	9,770	9,770	9,770	9,770	9,770
Annual Target DCDC (Tons)	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250
Total Monthly PM10 (Tons)	6,520	6,520	6,520	6,520	6,520	6,520	6,520	6,520	6,520	6,520	6,520	6,520
Total Monthly PM10 (Lbs)	0.00005	0.00005	0.00000	0.00000	0.00000	0.00001	0.00001	0.00003	0.00000	0.00000	0.00002	0.00004
Rolling 12-Month DCDC Total PM10 (Tons)	0.00002	0.00000	0.00001	0.00006	0.00000	0.00002	0.00000	0.00002	0.00002	0.00005	0.00003	0.00003
Rolling 12-Month DCDC Total PM10 (Lbs)	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509	0.0509
Total Monthly PM10 (Tons)	0.00002	0.00000	0.00001	0.00005	0.00000	0.00002	0.00000	0.00002	0.00002	0.00005	0.00003	0.00003
Rolling 12-Month DCDC Total PM10 (Tons)	0.0003	0.0002	0.0002	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003
Rolling 12-Month DCDC Total PM10 (Lbs)	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076	0.0076
EP 92 - D20 South Reactor Rotocloner (Tons)	886	686	446	655	616	811	594	446	534	512	844	833
Total Monthly PM10 (Lbs)	10.2	9.9	6.6	9.8	9.2	9.1	8.9	6.6	7.9	7.6	9.8	9.4
Rolling 12-Month Total PM10 (TONS)	0.0051	0.0050	0.0033	0.0049	0.0046	0.0045	0.0044	0.0033	0.0040	0.0039	0.0048	0.0047
Rolling 12-Month Total PM10 (Lbs)	110.0	102.0	108.6	110.2	110.5	110.3	109.6	109.5	108.7	105.9	105.1	104.9
Rolling 12-Month Total PM10 (TONS)	0.055	0.054	0.054	0.055	0.055	0.055	0.055	0.055	0.054	0.053	0.053	0.052
Operating Hours (Hrs)	375	363	343	357	336	333	324	243	291	279	351	346
Rolling 12-Month Total Operating Hours (Hrs)	4026	3960	3984	4036	4044	4038	4014	4006	3991	3875	3846	3840
EP 93 - D20 South Mixer Dust Collector (Tons)	886	686	446	655	616	811	594	446	534	512	844	833
Total Monthly PM10 (Lbs)	106.9	103.5	69.3	101.7	95.8	94.9	92.3	69.3	82.9	79.5	100.0	98.3
Rolling 12-Month Total PM10 (Lbs)	1147.4	1137.2	1135.4	1150.0	1152.5	1150.8	1144.0	1142.3	1134.6	1104.7	1096.1	1094.4
Rolling 12-Month Total PM10 (Tons)	0.57	0.57	0.57	0.57	0.56	0.56	0.57	0.57	0.57	0.55	0.55	0.55
Operating Hours (Hrs)	625	605	405	595	560	565	540	405	485	466	585	575
Rolling 12-Month Total Operating Hours (Hrs)	6710	6650	6640	6725	6740	6730	6690	6680	6635	6460	6410	6400
EP 94 - D20 South Mill Dust Collector (Tons)	886	686	446	655	616	811	594	446	534	512	844	833
Total Monthly PM10 (Lbs)	21.3	20.6	13.8	20.2	19.0	18.9	18.4	13.8	16.5	15.8	18.9	18.6
Rolling 12-Month Total PM10 (Lbs)	228.1	228.1	225.3	226.7	229.2	228.8	227.5	227.1	225.6	219.6	217.9	217.6
Rolling 12-Month Total PM10 (Tons)	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Operating Hours (Hrs)	625	605	405	595	560	565	540	405	485	466	585	575
Rolling 12-Month Total Operating Hours (Hrs)	6710	6650	6640	6725	6740	6730	6690	6680	6635	6460	6410	6400
EP 98 - South Hydrate Lime Silo DC PM10 (Lbs)	7.74	6.16	5.15	5.35	2.53	1.07	0.53	4.70	2.62	4.38	4.69	7.52
EP 98 - South Hydrate Lime Silo DC PM10 (TONS)	0.0039	0.0028	0.0025	0.0027	0.0013	0.0005	0.0003	0.0024	0.0013	0.0022	0.0023	0.0036
Rolling 12-Month Total PM10 (Lbs)	84.80	56.16	57.03	60.29	60.74	56.02	52.23	54.81	51.32	60.59	48.29	52.44
Rolling 12-Month Total PM10 (TONS)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
EP 99 - Lime Premix Dust Collector PM10 (Lbs)	11.35	9.03	7.55	7.85	3.71	1.58	0.78	6.90	3.84	6.42	6.87	11.03
EP 99 - Lime Premix Dust Collector PM10 (TONS)	0.0057	0.0045	0.0038	0.0039	0.0019	0.0008	0.0004	0.0034	0.0019	0.0032	0.0034	0.0055
Rolling 12-Month Total PM10 (Lbs)	80.38	82.40	83.84	88.42	68.09	82.16	78.60	80.39	75.28	74.20	70.83	78.91
Rolling 12-Month Total PM10 (TONS)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
EP 100 - Quicklime Silo Dust Collector PM10 (Lbs)	1.60	0.00	0.28	1.32	0.57	0.29	1.43	0.86	0.57	0.00	0.29	1.06
EP 100 - Quicklime Silo Dust Collector PM10 (TONS)	0.00080	0.00000	0.00014	0.00066	0.00028	0.00014	0.00071	0.00043	0.00028	0.00000	0.00014	0.00053
Rolling 12-Month Total PM10 (Lbs)	7.16	6.93	6.93	7.13	7.70	7.15	8.30	8.80	8.88	8.04	7.20	8.26
Rolling 12-Month Total PM10 (TONS)	0.0035	0.0035	0.0035	0.0036	0.0038	0.0036	0.0042	0.0043	0.0044	0.0040	0.0036	0.0041

Attachment E

Example Calcium Packing and Magnet Checklist

Carrollton Plant Form

QTF 0201-000-02

Calcium Packing Environmental and Magnet Checklist

Week Start Date: _____ Monday _____ Reviewed by Supervisor: _____

- For DAILY checks, write Operator initials or clock# if not in use, write NA. For WEEKLY or EVERY checks, write Operator initials or clock# and DATE.
- If process is not 2" or more supervision immediately. Protocols must be returned to target range within 8 hours.

BLACK CLOTH TEST – DAILY

	IT#	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Comments
MCP / D20 / D99 Dust Collector Stack	IT0470								
Bag Blowoff Dust Collector Stack EP-54	IT0565								

SCREEN INSPECTION – DAILY if item in use

	IT#	Mon	Tue	Wed	Thu	Fri	Sat	Sun
D99 Rotex Screen	IT0329							
MCP Scalping Sifter	IT0257							
D20 North – North Scalping Sifter	IT0358							
D20 North – South Scalping Sifter	IT0357							
D99 North Scalping Sifter	IT0458							
D99 South Scalping Sifter	IT0460							
D20 South Scalping Sifter	IT0815							

DP GAUGE READING – WEEKLY

	EP#	IT#	Clock#	Date	Reading	Target
D99 Dust Collector	EP-53	IT0469				N/A
D20 Dust Collector	EP-53	IT0383				N/A
MCP Dust Collector	EP-53	IT0259				N/A
D99 North Surge Bin Vent	EP-53	IT0476				N/A
D99 South Surge Bin Vent	EP-53	IT0477				N/A
Bag Blowoff Dust Collector	EP-54	IT0568				2-5 Ppm
MBS Semi-Bulk Bin Vent	EP-62	IT1280				2-3 Ppm
CEB Semi-Bulk Bin Vent	EP-67	IT1290				2-3 Ppm
MCP Packer Bin Vent	EP-61	IT0877				2-3 Ppm
D99 Packer Bin Vent	EP-68	IT0977				2-3 Ppm
D20 Packer Bin Vent	EP-65	IT0777				Not Specific
HYVAC Dust Collector	EP-55	IT0818				Not Specific

D99 SYSTEM Magnets – DAILY IF ITEM IN USE

	IT#	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Magnet Above Flow Splitter								
Magnets(2) Above Sweco								
Auto Magnet-Check Sample								
Magnet Below Dust Collector								
Airvey Inline Magnet EVERY Transfer								

MCP SYSTEM Magnets – DAILY IF ITEM IN USE

	IT#	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Magnet Above Conveyor	IT0258							
Magnet Above Sweco	IT0257							
Auto Magnet – Check Sample	IT0870							
Magnet Below Dust Collector	IT0259							
East Bulk Loading Magnet EVERY Truck	IT0271-04							
West Bulk Loading Magnet EVERY Truck	IT0271-05							

D20 NORTH SYSTEM Magnets – DAILY IF IN USE

	IT#	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Magnet Above Flow Splitter	IT0355							
Magnets (2) Above Sweco	IT0356 & IT0357							
Auto Magnet – Check Sample	IT0767							
Magnet Below Dust Collector	IT0383							

D20 SOUTH SYSTEM Magnets – DAILY IF IN USE

	IT#	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Magnet above D20 South Scalping Sifter	IT0815							

Attachment F

Example Department 20 Checklist

Carondelet Plant Form

QTF 5000-000-001

Department 20 Environmental Checklist

- Instructions:**
- Record pressure drop data for each entry below.
 - If the equipment runs any time during the week, a reading must be recorded while it is running.
 - Only record readings for the Lime Silo when blowing off, otherwise mark as not in operation. (DP reading is obtained on control room PC.)
 - If the pressure drop is outside of the normal range, notify supervision immediately.
 - Corrective action must be taken, and pressure drops returned to normal within eight hours.
 - Turn the form into supervision upon completion.

Emission Point Number	Emission Point Description	Equipment in Operation?	Normal Pressure Drop (" H ₂ O)	Observed Pressure Drop (" H ₂ O)	Date	Oper.'s Initials	Comments / Corrective Actions
EP-46	Pyran Lime Mill Dust Collector Item 0413	yes / no	2-8				
EP-52	Fluidizer Dust Collector Item 0033	yes / no	2-8				
EP-94	South Mill Dust Collector Item 0440	yes / no	2-8				
EP-93	South Mixer Dust Collector Item 0325	yes / no	2-8				
EP-100	Lime Silo Dust Collector	yes / no	1-3				
EP-92	South Reactor Rotoclone Item 0225	yes / no	At least 2.9 gpm				

Additional comments:

Reviewed By: _____

Date: _____

Attachment G

Example Building 2 Pressure Drop Log Sheet

Carondelet Plant Form

QTF 2002-000-003

Building 2 Air Emission Points Pressure Drop Log Sheet

Instructions

- Record pressure drop data for each entry below at the indicated time (allowing time for the reading to stabilize.)
- Pressure drop data is required at least once per week.
- If the pressure drop is outside of the normal range, notify supervision immediately.
- Corrective action must be taken, and pressure drops returned to normal within eight hours.
- Turn the form in to supervision upon completion.

Emission Point Number	Emission Point Description	When to Take Reading	Equipment Running?	Date	Time	Instrument Number	Normal Pressure Drop (" H ₂ O)	Observed Pressure Drop (" H ₂ O)	Clock #	Comments / Corrective Actions
EP-35	DCP #4 Mill Dust Collector (07IT0714)	Record data after one hour of feeding the #4 Mill for the first time of the Week	yes / no			07PDG0714-01	2 - 8			
EP-42	TCP Imp Mill Dust Collector (10IT0932)	Take reading after one hour of feeding the TCP Mill for the first time of the Week	yes / no			10PDG0932-01	2 - 8			
EP-43	TCP Blender / Packer Dust Collector (90IT0460)	Take reading after one hour of feeding the TCP Mill for the first time of the Week	yes / no			90PDG0460-01	2 - 8			
EP-26	North Lime Silo Dust Collector (07IT7127)	Take reading during Lime Truck unloading for the first Lime truck of the Week	yes / no			07PDI7127-01 (Delta V)	1 - 3			
EP-98	South Lime Silo Dust Collector (07IT7136)	Take reading during Lime Truck unloading for the first Lime truck of the Week	yes / no			07PDI7136-01 (Delta V)	1 - 3			
EP-99	Lime Premix Receiving Bin (07IT7145)	Take reading during first Lime Premix of the Week	yes / no			07PDI7145-01 (Delta V)	1 - 3			

Attachment H

Example of maintenance activities tracking

Maintenance activity tracked in SAP.

Below is the screen shot for the EP-105 TCP Fines Dust Collector.

Type	Order	Created on	Entered by	Description	Functional Location	P	Pr.	MAT	Total actual costs
P	5188284	05/20/2009	TCK00HI	- EPA PM-TCP FINES DUST COLL	CT-PHS-TCMP-DC0472	3	PM	PM	0.00
RO	5180557	05/23/2009	WIKKEMP	ADJUST TCP DC VIBRATOR	CT-PHS-TCMP-DC0472	2	PM	REP	166.70
PR	5193168	07/30/2009	IP1020090730	-(EM) EPA PM-TCP FINES DUST COLL	CT-PHS-TCMP-DC0472	3	PM	PM	750.16
PR	5205764	01/25/2010	TCK00HI	-(SM) EPA PM-TCP FINES DUST COLL	CT-PHS-TCMP-DC0472	3	PM	PM	294.21
RO	5206434	02/05/2010	GABURL	Replace the diaphragm	CT-PHS-TCMP-DC0472	3	PM	REP	163.37
RO	5209275	03/17/2010	TCK00HI	PT TOP DOOR OF COLLECTOR LEAKING AT THE	CT-PHS-TCMP-DC0472	3	PM	REP	0.00
SF	5209335	03/17/2010	GABURL	Replace all the handrails and fittings o	CT-PHS-TCMP-DC0472	2	PM	REP	14,459.13
RO	5215326	05/11/2010	DPROBE	Check Pulsers D.C. 472 TCP	CT-PHS-TCMP-DC0472	2	PM	REP	326.76
PR	5217491	07/13/2010	TCK00HI	-(EM) EPA PM-TCP FINES DUST COLL	CT-PHS-TCMP-DC0472	3	PM	PM	135.00
PR	5237173	01/21/2011	IP1020110121	-(EM) EPA PM-TCP FINES DUST COLL	CT-PHS-TCMP-DC0472	3	PM	PM	100.00
RO	5237527	01/26/2011	TCK00HI	REBAG DUST COLLECTOR	CT-PHS-TCMP-DC0472	1	PM	REP	10,316.32
RO	5237591	01/27/2011	MDDUGA	electrically ready Dust Collector for wa	CT-PHS-TCMP-DC0472	1	PM	REP	334.47
RO	5237697	01/28/2011	GABURL	Put new gaskets on all the doors. Put th	CT-PHS-TCMP-DC0472	2	PM	REP	3,042.83
RO	5237767	01/29/2011	TJBRH	Remove and replace the broken seal tight	CT-PHS-TCMP-DC0472	2	PM	REP	245.00
RO	5237832	01/30/2011	KADRUR	Need to open a section of duct to clean	CT-PHS-TCMP-DC0472	1	PM	REP	826.65
RO	5238597	02/09/2011	WIKKEMP	Isolate Fines DC by installing blanks at	CT-PHS-TCMP-DC0472	2	PM	REP	817.82
SF	5240055	02/23/2011	GABURL	Repair the hand rail that is located sou	CT-PHS-TCMP-DC0472	2	PM	REP	1,558.24
RO	5240911	03/07/2011	WIKKEMP	CONTRACTOR Repair pinhole leaks in TCP F	CT-PHS-TCMP-DC0472	2	PM	REP	13,099.19
RO	5241101	03/09/2011	GABURL	Prepare dust collector for repair	CT-PHS-TCMP-DC0472	2	PM	REP	167.23
RO	5241660	03/16/2011	GABURL	Set the TCP Fines Dust Collector up to h	CT-PHS-TCMP-DC0472	1	PM	REP	167.23
RO	5241745	03/16/2011	GABURL	Put bags back in	CT-PHS-TCMP-DC0472	1	PM	REP	0.00
RO	5243116	03/28/2011	WIKKEMP	Fines DC Mohl Ball (IP #9411)	CT-PHS-TCMP-DC0472	2	PM	REP	668.98
PR	5252559	07/20/2011	IP1020110720	-(EM) EPA PM-TCP FINES DUST COLL	CT-PHS-TCMP-DC0472	3	PM	PM	90.00
PR	5250100	08/13/2011	IP1020110813	FINES DUST COLLECTOR CHANGEOVER	CT-PHS-TCMP-DC0472	3	PM	PM	0.00
SF	5258331	09/09/2011	TJBRH	Hand rail post is split south of 472 dcs	CT-PHS-TCMP-DC0472	2	PM	REP	334.49
PR	5267501	01/09/2012	TCK00HI	-(EM) EPA PM-TCP FINES DUST COLL	CT-PHS-TCMP-DC0472	3	PM	PM	90.00
PR	5270897	05/05/2012	IP1020120905	FINES DUST COLLECTOR CHANGEOVER	CT-PHS-TCMP-DC0472	3	PM	PM	533.17
PR	5263591	07/14/2012	IP1020120714	-(EM) EPA PM-TCP FINES DUST COLL	CT-PHS-TCMP-DC0472	3	PM	PM	135.00
PR	5297526	12/02/2012	IP1020121202	FINES DUST COLLECTOR CHANGEOVER	CT-PHS-TCMP-DC0472	3	PM	PM	0.00
PR	5302720	01/08/2013	TCK00HI	-(EM) EPA PM-TCP FINES DUST COLL	CT-PHS-TCMP-DC0472	3	PM	ESH	359.35
RO	5306557	02/19/2013	TCK00HI	Replace seals. Seal on door allowing ai	CT-PHS-TCMP-DC0472	4	PM	REP	0.00
RO	5314449	05/17/2013	GABURL	Remove the 2 blanks and the 4 desecant b	CT-PHS-TCMP-DC0472	2	PM	REP	588.71
PR	5315607	05/28/2013	IP1020130528	FINES DUST COLLECTOR CHANGEOVER	CT-PHS-TCMP-DC0472	3	PM	PM	586.57
PR	5319281	07/09/2013	IP1020130709	-(EM) EPA PM-TCP FINES DUST COLL (o	CT-PHS-TCMP-DC0472	3	PM	ESH	481.40
PR	5338154	01/05/2014	IP1020140105	-(EM) EPA PM-TCP FINES DUST COLL	CT-PHS-TCMP-DC0472	3	PM	ESH	150.65
RO	5339147	02/05/2014	WIKKEMP	Ready TCP Fines DC for Service. This in	CT-PHS-TCMP-DC0472	2	PM	REP	514.50
RO	5341241	02/26/2014	GABURL	Put 2 blanks and 4 desecant bag in	CT-PHS-TCMP-DC0472	2	PM	REP	385.87
PR	5345227	04/05/2014	IP1020140405	FINES DUST COLLECTOR CHANGEOVER	CT-PHS-TCMP-DC0472	3	PM	PM	164.36

Attachment K
 Example Daily Fuel Readings

Daily Fuel Readings

Year	Month	Data								12 Month Rolling Totals		
		Sum of (Top Meter) Plant Natural Gas MBTU's	Sum of (Bottom Meter) Boiler Room Natural Gas MBTU's	Sum of Total Plant Gas MBTU's	Sum of #1 Boiler Fuel Oil Use (gal)	Sum of #2 Boiler Fuel Oil Use (gal)	Sum of Total Oil Use	Sum of NOx	Sum of SOx	Nox	Sox	
(blank)	(blank)											
2014		7	6,328	18,853	25,181				0.1719 T	0.0018 T	2.8664 T	0.0302 T
		6	10,060	21,624	31,684				0.2163 T	0.0023 T	2.9422 T	0.0310 T
		5	9,255	27,700	36,954				0.2523 T	0.0027 T	2.9329 T	0.0309 T
		4	10,153	27,358	37,511				0.2561 T	0.0027 T	2.9437 T	0.0310 T
		3	11,455	29,699	41,154				0.2809 T	0.0030 T	2.9397 T	0.0310 T
		2	11,267	28,357	39,624				0.2705 T	0.0029 T	2.9622 T	0.0312 T
		1	9,248	25,167	34,415				0.2349 T	0.0025 T	2.9778 T	0.0314 T
2013		12	9,998	25,569	35,567				0.2428 T	0.0026 T	3.0056 T	0.0317 T
		11	10,635	25,048	35,682				0.2436 T	0.0026 T	3.0131 T	0.0318 T
		10	12,642	27,515	40,158				0.2741 T	0.0029 T	2.9732 T	0.0314 T
		9	6,542	17,739	24,280				0.1657 T	0.0017 T	2.9518 T	0.0311 T
		8	11,481	26,203	37,685				0.2573 T	0.0027 T	2.9161 T	0.0308 T
		7	10,924	25,364	36,288				0.2477 T	0.0026 T	2.9382 T	0.0310 T
		6	8,657	21,658	30,315				0.2069 T	0.0022 T	2.9056 T	0.0306 T
		5	11,400	27,142	38,542				0.2631 T	0.0028 T	2.9681 T	0.0313 T
		4	10,254	26,654	36,918				0.2520 T	0.0027 T	2.9728 T	0.0314 T
		3	12,286	32,160	44,446				0.3034 T	0.0032 T	2.9497 T	0.0311 T
		2	12,166	29,752	41,918				0.2862 T	0.0030 T	2.7479 T	0.0290 T
		1	10,246	28,243	38,489				0.2627 T	0.0028 T	2.7871 T	0.0294 T

Attachment L

EP-92, EP-93 & EP-94 Emission Factors

EU	Description	Process Weight Rate (ton/hr)	PM10 Emission Factor (lb/ton)	Capture Device Efficiency (%)	Control Device Efficiency (%)	Uncontrolled Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)
EP-92	D20 SOUTH REACTOR	1.13	0.05	100.00	98.10	0.09	0.0018
EP-93	D20 SOUTH MIXER	1.13	0.22	100.00	95.00	0.42	0.021
EP-94	D20 SOUTH MILL	1.13	0.22	100.00	95.00	0.42	0.021

Note: values have been rounded

Attachment M
Existing Emergency SI RICE at an Area Source

DRAFT – FOR REVIEW ONLY

August 16, 2013

MACT ZZZZ Requirements

Existing Emergency SI RICE at an Area Source

Source Information:

- Facility is an area source for HAP
- One (1) natural gas fired, spark ignition (SI) emergency generator - 12 hp and it was constructed in 1983

Compliance Date: October 19, 2013 [63.6595(a)(1)]

Emission Limitations

- None

Work Practice Requirements [63.6603]

- **Table 2d, 5a** – Change oil and filter every 500 hours of operation or annually, whichever comes first;
- **Table 2d, 5b** – Inspect spark plugs every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and
- **Table 2d, 5c** – Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Startup Period Requirements [63.6603]

- **Table 2d** – Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which the time the non-startup emission limitations apply.
- **Table 2d (footnote)** – If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

Fuel Requirements

- None

DRAFT – FOR REVIEW ONLY

Attachment M
(continued)

August 16, 2013

MACT ZZZZ Requirements

Existing Emergency SI RICE at an Area Source

Source Information:

- Facility is an area source for HAP
- One (1) natural gas fired, spark ignition (SI) emergency generator - 12 hp and it was constructed in 1983

Compliance Date: October 19, 2013 [63.6595(a)(1)]

Emission Limitations

- None

Work Practice Requirements [63.6603]

- **Table 2d, 5a** – Change oil and filter every 500 hours of operation or annually, whichever comes first;
- **Table 2d, 5b** – Inspect spark plugs every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and
- **Table 2d, 5c** – Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Startup Period Requirements [63.6603]

- **Table 2d** – Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which the time the non-startup emission limitations apply.
- **Table 2d (footnote)** – If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

Fuel Requirements

- None

DRAFT – FOR REVIEW ONLY

Attachment M
(continued)

August 16, 2013

MACT ZZZZ Requirements

Existing Emergency SI RICE at an Area Source

Source Information:

- Facility is an area source for HAP
- One (1) natural gas fired, spark ignition (SI) emergency generator - 12 hp and it was constructed in 1983

Compliance Date: October 19, 2013 [63.6595(a)(1)]

Emission Limitations

- None

Work Practice Requirements [63.6603]

- **Table 2d, 5a** – Change oil and filter every 500 hours of operation or annually, whichever comes first;
- **Table 2d, 5b** – Inspect spark plugs every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and
- **Table 2d, 5c** – Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Startup Period Requirements [63.6603]

- **Table 2d** – Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which the time the non-startup emission limitations apply.
- **Table 2d (footnote)** – If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

Fuel Requirements

- None

DRAFT – FOR REVIEW ONLY

Attachment M
(continued)

August 16, 2013

MACT ZZZZ Requirements

Existing Emergency SI RICE at an Area Source

Source Information:

- Facility is an area source for HAP
- One (1) natural gas fired, spark ignition (SI) emergency generator - 12 hp and it was constructed in 1983

Compliance Date: October 19, 2013 [63.6595(a)(1)]

Emission Limitations

- None

Work Practice Requirements [63.6603]

- **Table 2d, 5a** – Change oil and filter every 500 hours of operation or annually, whichever comes first;
- **Table 2d, 5b** – Inspect spark plugs every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and
- **Table 2d, 5c** – Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Startup Period Requirements [63.6603]

- **Table 2d** – Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which the time the non-startup emission limitations apply.
- **Table 2d (footnote)** – If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

Fuel Requirements

- None

DRAFT – FOR REVIEW ONLY

Attachment M
(continued)

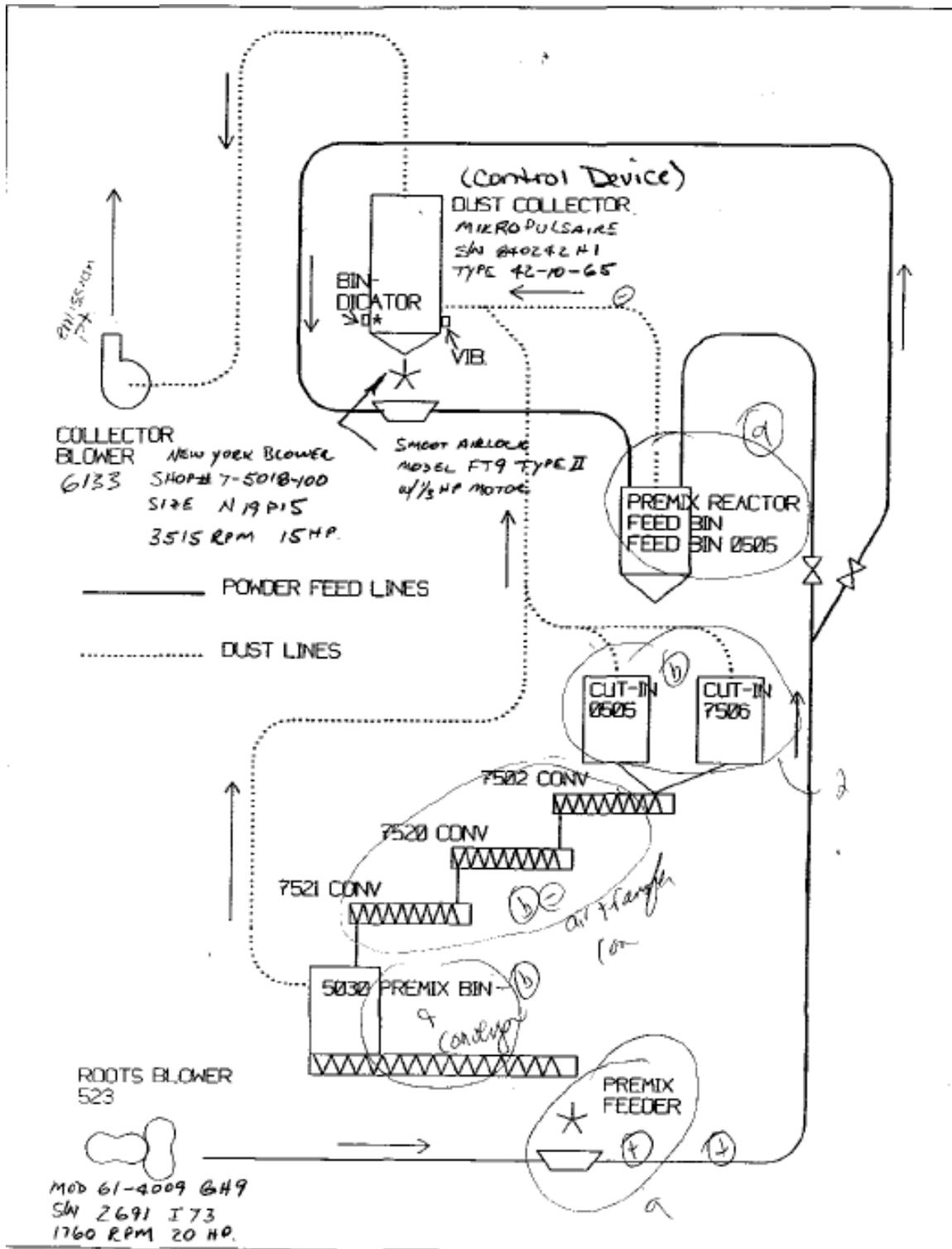
August 16, 2013

- **63.6650(f)** – Each affected source that has obtained a title V operating permit pursuant to 40 CFR 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A).

Recordkeeping

- **63.6655(a)(4)** – Keep records of all required maintenance performed on the air pollution control and monitoring equipment.
- **63.6655(d)** – Keep records required in Table 6 to show continuous compliance with each emission or operating limitation that applies to you.
- **63.6655(e)** – Keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan.
- **63.6655(f)** – Keep records of the hours of operation of the RICE that is recorded through the non-resettable hour meter. Document how many hours are spent for emergency operation, what classifies an emergency and how many hours are non-emergency. If used for demand response, keep records of notification of the emergency situation and time the engine was operated as part of demand response.

Attachment N
Flow Diagram/Schematic for Cut-In & Premix



STATEMENT OF BASIS

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 July 2, 2007; complete November 9, 2007;
- 2) The most recent five (5) years of Emissions Inventory Questionnaire (MoEIS), beginning with 2007; and
- 3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.

Project History

Project #	Start Date	Expires	Project Type	Status	Completion Date	Permit No	Description
200104032	04/05/01		Local CP	Permit Issued	05/05/01	00-07-038	Process Expansion
200107059	07/18/01		Local CP	Permit Issued	08/17/01	01-06-018	Expand process, add boiler
200307097	07/16/03		Local CP	Permit Issued	08/08/03	03-01-004	Lime Department
200308090	08/22/03		Local CP	Permit Issued	09/18/03	01-06-018PM	Expand process, add boiler
200310013	10/01/03		Local CP	Permit Issued	10/30/03		Nullify phosphorus tank permit
200310025	10/06/03		Local CP	Permit Issued	10/30/03		Add MCP to emission points
200410024	10/12/04	02/24/09	Part 70 Operating Permit Admin. Amendment	Closed out, per policy	02/17/05	OP2004-005A	Responsible official
200412063	12/15/04		Part 70 Operating Permit Admin. Amendment	Amendment Approved	06/27/05	OP2004-005	Responsible Official Change
200507024	07/05/05		Local CP	Permit Issued	07/20/05	04-11-022	Monitoring Plan
199705034	05/05/97	02/24/09	Part 70 Operating Permit	Operating Permit Issued	02/26/04	OP2004-005	Chemical Manufacture
199903071	03/11/99		Local CP	Permit Issued	04/10/99	99-02-008	Phosphate fertilizer mill
200511101	12/01/05		Part 70 Operating Permit Admin. Amendment	Amendment Approved	12/21/05	OP	Ownership Change
200606052	06/15/06		Local CP	Permit Issued	07/19/06		Loading system
200708001	07/27/07		Local CP	Permit Issued	08/15/07	07-04-006	Dust Collectors
200710116	10/15/07		Local CP	Permit Issued	12/15/07	07-10-021	Increase production
200805015	05/07/08		Local CP	Permit Issued	05/29/08	07-12-025	Transfer system

Project #	Start Date	Expires	Project Type	Status	Completion Date	Permit No	Description
200902090	02/27/09		Local CP	Permit Issued	03/23/09	09-01-003	Grinder and classifier
201006033	06/10/10		Part 70 Operating Permit Off-Permit Changes	Closed Out Inappropriate Request	12/14/10	OP	
201012011	12/07/10		Local CP	Permit Issued	12/20/10	10-08-018	New production unit
201107062	07/21/11		Local CP	Permit Issued	08/01/11	11-06-013	New mixing process

Permit History

Permit Number	Description
January 22, 1969	City of Saint Louis Source Registration Form for a bag packaging machine St. Regis, double spout. force flow, valve bags (EP-20)
May 19, 1972	City of Saint Louis Source Registration Form for manufacture of sodium tripolyphosphate (EP-41)
December 17, 1973 (approved 9/10/74)	City of Saint Louis Source Registration Form for two (2) DCP mill process burners (EP-35) (Revised by permit dated December 5, 2000)
April 1974	City of Saint Louis Source Registration Form for milling and drying of product (EP-35)
March 19, 1975	City of Saint Louis Source Registration Form for new dust collection system for bag blow off station
November 15, 1976	City of Saint Louis Source Registration Form for installation of new dust collector for process conveyors and rededication of old dust collector for ventilation of equipment (EP-42)
November 15, 1976	City of Saint Louis Source Registration Form for a vacuum cleaning system for Monsanto's warehouse, packaging and Pyran production area (EP-55)
February 28, 1978	City of Saint Louis Source Registration Form for calcium phosphate milling, classifying, blending and packaging operations (EP-31)
April 5, 1979	City of Saint Louis Source Registration Form for New HCl storage tank with vent for breathing — both normal breathing and displacement during filling (EP-57)
June 12, 1979	City of Saint Louis Source Registration Form for alumina trihydrate storage silo ventilation (EP-45)
May 27, 1982	City of Saint Louis Source Registration Form for stack for tri-calcium phosphate — third floor hold tank (EP-38)
May 27, 1982	City of Saint Louis Source Registration Form for a stack for tetra sodium pyrophosphate (TSPP) tank (EP-38)
June 21, 1983	City of Saint Louis Source Registration Form for stack for unmilled tri calcium phosphate bag filling. Venting from the bag filler into the surge bin and venting from the surge bin to the dust collector (EP-44)

Permit Number	Description
February 22, 1984	Saint Louis Department of Public Safety Permit for the Installation of a Fuel or Refuse Burning Device for Clayton 3,876,000 BTU /hr input steam boiler —natural gas fuel
March 8, 1984	City of Saint Louis Source Registration Form for nuisance dust collected at bag receiving conveyor for automatic bag filling operation (EP-54)
July 31, 1984	City of Saint Louis Source Registration Form for stack for DCP bulk truck and railcar loading. Venting from railcars/trucks and totes to the dust collector (EP-56)
July 1984	City of Saint Louis Source Registration Form for ventilation of monocalcium phosphate bulk loading, classifying and storage operations
September 5, 1984	Saint Louis Department of Public Safety Permit for the Installation of a Fuel or Refuse Burning Device for Vogt 57.8 MMBTU/hour boiler — natural gas or fuel oil
March 29, 1985	City of Saint Louis Source Registration Form for stack for dust collection from the STP granular area (new)
March 29, 1985	City of Saint Louis Source Registration Form for vacuum blower exhaust (EP-69)
January 21, 1986	City of Saint Louis Source Registration Form for clean air to atmosphere vent on filter bag dump station
January 21, 1986	City of Saint Louis Source Registration Form for a discharge from a filter bag dump station
February 4, 1986	City of Saint Louis Source Registration Form for acid/base/water reaction —with solids additions — tri magnesium phosphate wet mix stack
February 4, 1986	City of Saint Louis Source Registration Form for acid/base/water reaction —with solids additions — TCP wet mix stack
April 16, 1986	City of Saint Louis Source Registration Form for vapor space sweep (from #2 Mix Tank) during production of di/tri-potassium phosphate (EP-25)
June 6, 1986	City of Saint Louis Source Registration Form for ventilation through fan to atmosphere of the CaO + H ₂ O reactor (EP-27)
October 21, 1986	City of Saint Louis Source Registration Form for ventilation through dust collector of process equipment plus mill
February 20, 1987	City of Saint Louis Source Registration Form for ventilation through TCP dust collector and TCP process equipment (EP-43)
February 23, 1988	City of Saint Louis Source Registration Form for discharge from a pneumatic lime transfer system (EP-47)
February 23, 1988	City of Saint Louis Source Registration Form for discharge from Rotoclone wet type dust collector on reactor (EP-48)

Permit Number	Description
February 23, 1988	City of Saint Louis Source Registration Form for discharge from pulse type dust collector on south mixer (EP-49)
November 21, 1989	City of Saint Louis Source Registration Form for lime silos, crusher and elevator (EP-26)
November 21, 1989	City of Saint Louis Source Registration Form for discharge from MCP#2 spray tower and aging bins (EP-29)
July 13, 1990	City of Saint Louis Source Registration Form for discharge from cyclone on Dept. 8 dryer exhaust duct (EP-24)
January 14, 1992	City of Saint Louis Source Registration Form for ventilation through dust collector of process equipment, mill and cut-in station
November 22, 1993	Dicalcium phosphate packaging line (EP-53)
December 2, 1993	Phosphorous storage tank (Replaced by permit dated December 12, 1997)
April 18, 1994	Request for a temporary dust collection system for STP granular bulk loading (temporary authorization expired September 1, 1994)
April 20, 1994	Phosphorous storage tank (amends permit dated December 2, 1993) (Replaced by permit dated December 12, 1997)
94-03-006	STP granular bulk loading and dust collection system (EP-21) (Replaced by Permit #07-12-025)
94-10-100	DCP semi-bulk filler bin system
94-10-101	DCP bag packing bin system
94-10-102	MCP bag packing bin (Modified by Permit #07-10-021)
94-10-103	Semi-bulk packing bin
94-10-104	Department 20 packing bin system (EP-65)
94-10-108	DCP recovery and premix dust collection system (EP-32)
94-10-109	Bin vent filter for STP dense phase system (Revised by Permit #99-02-014)
94-10-110	STP #0038 — receiver bin
94-10-111	STP #0210 — receiver bin
94-10-112	STP Packing (Replaced by Permit #07-04-006)
94-10-113	STP bin vent — West
94-10-117	Calcium phosphate dust collection system (EP-54)

Permit Number	Description
95-07-084	SHMP dust collector
December 12, 1997	Amended Permit — Phosphorous storage tank (replaces permits dated December 2, 1993 and April 20, 1994) (Permit nullified September 18, 2003)
99-02-008	MCP process mill
99-02-014 (Permit Matter)	Revision of Permit No. 94-10-109
December 5, 2000	Addition of magnesium oxide to milling and drying operations (EP-35 and EP-73) (Revision to Dec. 17, 1973 source registration)
00-07-038	Expansion to sodium aluminum phosphate process (Replaced by Permit #0106-018)
01-06-018	Expansion to sodium aluminum phosphate process and addition of new boiler #1 (replaces Permit #00-07-038) (Replaced by Permit #01-06-018 PM)
01-06-018 PM	Expansion to sodium aluminum phosphate process and addition of new boiler #1 (replaces Permit #01-06-018)
03-01-004	Modification of lime department
OP2004-005	Title V Operating Permit
04-11-022	Soda ash & STPP rework transfer system (Permit withdrawn June 15, 2006)
07-04-006	Addition of two new bin vent dust collectors to the sodium tripolyphosphate packaging transfer system (replaces permit 94-10-
07-10-021	Modification of Permit 94-10-102 (MCP Packing Bin EP-61)
07-12-025	Sodium Tripolyphosphate Bulk Loading and Transfer System Modification (replaces permit 94-03-006)
09-01-003	Tricalcium Phosphate Grinder and Air Classifier
09-10-021 NPR	No Permit Required Determination: EP-35 DCP Mill Dust Collector Replacement
10-08-018	Potassium Phosphate Salts Production Unit in Building #19 (EP-106, EP-107, EP-108, EP-109)
11-06-013	(Dated August 1, 2011; PAMS 2011-07-062; new Potassium Phosphate Salts Production Unit in Building #19 and Tetrapotassium Pyrophosphate (TKPP) Solutions Blending Unit) (replaces Permit 10-08-018)
11-06-013A	(Dated October 23, 2012; PAMS 2012-10-020; amendment to remove a cyclone originally permitted by City of St Louis Permit Number 11-06-013. This modification does not increase the permitted emissions from this equipment.)

Permit Number	Description
072013-016	Activation of the North Lime Silo, EP-26

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.

None

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 10-5.220, *Control of Petroleum Liquid Storage, Loading and Transfer*

This regulation does not apply to the two 110,000 gallon diesel fuel storage tanks at the installation (EP-11) because diesel fuel has a true vapor pressure less than 4.0 psia at 90°F (the vapor pressure of diesel fuel is 0.04 psia at 100°F). The regulation does not apply to the 300 gallon diesel fuel storage tank (EP-84) for the same reason, and because the tank has a capacity less than 40,000 gallons. No provisions of this regulation are applicable to the 300 gallon gasoline storage tank (EP-83).

10 CSR 10-5.510, *Control of Emissions of Nitrogen Oxides*

This regulation does not apply to the various natural gas process burners throughout the installation since they all have the potential to emit less than 30 tons per year of NO_x. 10 CSR 10-5.510 (1)(C)9. exempts any unit with actual annual NO_x emissions less than 30 tons. The largest of these units is the STP Calciner (EP-18), which is equipped with a 20 mmBtu/hr natural gas process burner. The calculation below shows that this unit has the potential to emit less than 30 tons per year of NO_x:

Maximum Design Rate: 20 mmBtu/hr
 Heat content of natural gas: 1050 mmBtu/mmcf (AP-42, Appendix A)
 Maximum Rate of Fuel Usage: (20 mmBtu/hr)/(1050 mmBtu/mmcf) = 0.01905 mmcf/hr
 NO_x emission factor: 94 lb/mmcf (AP-42, Table 1.4-1)

$$\text{NO}_x \text{ PTE} = 0.01905 \frac{\text{mmcf}}{\text{hr}} \times 94 \frac{\text{lb NO}_x}{\text{mmcf}} \times 8760 \frac{\text{hour}}{\text{year}} \div 2000 \frac{\text{lb}}{\text{ton}} = 7.84 \frac{\text{tons NO}_x}{\text{year}}$$

Construction Permit Revisions

The following revisions were made to construction permits for this installation:

All Construction Permits:

In many instances, the local agency reiterated the maximum hourly design rate, and other construction design parameters, as special permit conditions of the construction permit. These conditions are not

necessary, since the applicants are required by law to construct according to the application that was submitted and they received approval for. In addition, these conditions are not directed to dealing with air quality concerns, but rather how the applicant is constructing. Since operational design parameters are how the the equipment is intended to be operated, the equipment is incapable of exceeding the conditioned limit. The reviewer has removed the construction permit conditions found to be of this type.

Several St. Louis City construction permits referenced in the permit required records to be retained for a minimum of three years. These requirements have been changed in the permit to five years in order to meet the requirements in paragraph (6)(C)1.C.(II)(b)I of 10 CSR 10-6.065, *Operating Permits*.

St. Louis City Construction Permit #94-10-113

This permit simply reiterates design parameters of the equipment. In addition, the equipment would be in compliance (if subject) without the control/product recovery equipment.

St. Louis City Construction Permit #94-10-108

The only remarkable additional emission limitation in this permit is the Black Cloth Test. This test is not a reference method and is no longer used by any other source in this state. EP32 is subject to a restrictive opacity standard (10%). EP32 would be in compliance (if subject) without the control/product recovery equipment.

City of St. Louis Source Operation Registration Form Dated December 17, 1973

City of St. Louis Local Construction Permit Letter Dated December 5, 2000

This permit simply reiterates design parameters of the equipment. In addition, the equipment would be in compliance (if subject) without the control/product recovery equipment.

St. Louis City Construction Permit #94-10-117

The only remarkable additional emission limitation in this permit is the Black Cloth Test. This test is not a reference method and is no longer used by any other source in this state. EP54 is subject to a restrictive opacity standard (10%). EP54 would be in compliance (if subject) without the control/product recovery equipment.

St. Louis City Construction Permit #94-10-109, Revised by #99-02-014

EP66 is subject to a restrictive opacity standard (10%). EP66 would be in compliance (if subject) without the control/product recovery equipment.

St. Louis City Construction Permit #94-10-110 & #94-10-111

The monthly limit for EP70 exceeds the physical capacity of the equipment (4 tons per hour). However, the monthly limit for EP71 is less than the physical capacity (6 tons per hour). The limits on hours per year are impracticable (8736 hours per year), being only one day short of a full year. There will never be a year where they can operate 8736, if maintenance is considered. EP70 and EP71 would be in compliance (if subject) without the control/product recovery equipment.

St. Louis City Construction Permit #07-04-006

This permit does not include PM₁₀ emission record keeping in the construction permit for EP-63, EP-102 and EP-103, since there was no corresponding emission limit associated with the tracking. The permittee is already required to report all emissions on an annual basis, and that is deemed sufficient for the purposes of tracking emissions. There was a special condition that referred to an emergency generator with visible emission limit. That special condition has been determined to have been included in error, and has not been included in this permit.

St. Louis City Construction Permit #01-06-018PM

This permit reiterates design parameters for EP96. The permittee has removed fuel oil from the site and disconnected the piping that connects the old tanks from the boilers. A construction permit from the permitting authority would now be required to combustion any fuel but natural gas.

To improve the operating effectiveness of the rotoclone and reduce maintenance and service, the maximum flow requirement of 5.0 gallons per minute on EP92 is removed.

St. Louis City Construction Permits # 07-12-025, # 09-01-003 and #11-06-013

These permits placed a monitoring method of USEPA Test Method 22 for opacity on emission units EP-22, EP-104, EP-105, EP-106, EP-107 and EP-111. St. Louis City did this in an effort to mimic the permitting authorities monitoring procedure at the time. Unfortunately, St. Louis City failed to mimic the permitting authority's wording and USEPA Test Method 22 is not the reference method cited in the regulation for the opacity limit. This operating permit is dropping the USEPA Test Method 22 as the monitoring method. Instead the permittee will be required to use the same method required for their other emission units.

New Source Performance Standards (NSPS) Applicability Issues

40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*

This regulation does not apply to No. 2 Boiler (EP-13) since the boiler was constructed prior to June 9, 1989.

The New Boiler No. 1 (EP-96) has a heat capacity between 10 and 100 mmBtu/hr and was constructed after June 9, 1989. The permittee chose initially to demonstrate compliance with the SO₂ standards based on fuel supplier certification. As stated in §60.44c(h), the initial performance test consisted of that certification, as described under §60.48c(f)(1). A Method 9 observation was performed on EP-96 on December 18, 2001 to fulfill the particulate matter performance test requirements of §60.45c. Subpart Dc does not contain any provisions for continuous compliance demonstration with the particulate limit (which is in the form of an opacity standard), however construction permit 01-06-018PM requires opacity monitoring sufficient to demonstrate compliance with the NSPS limitation. However, all boilers are now natural gas fired only. The permittee has removed fuel oil from the site and disconnected the piping that connects the old tanks from the boilers. A construction permit from the permitting authority would now be required to combustion any fuel but natural gas.

40 CFR Part 60, Subpart K, *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978*

This regulation does not apply to the two 110,000 gallon diesel fuel storage tanks at the installation (EP-11), which were constructed in 1976, because they do not store petroleum liquids, as defined by §60.111(b).

40 CFR Part 60, Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*

This regulation does not apply to the 300 gallon gasoline storage tank (EP-83), which was constructed in 1986, because it has a storage capacity less than 10,600 gallons.

40 CFR Part 60, Subpart T, *Standards of Performance for the Phosphate Fertilizer Industry: Wet-Process Phosphoric Acid Plants*

This regulation does not apply because the installation is not a wet-process phosphoric acid plant. The installation also no longer makes phosphoric acid using a thermal process.

40 CFR Part 60, Subpart U, *Standards of Performance for the Phosphate Fertilizer Industry: Superphosphoric Acid Plants*

This regulation does not apply because the installation is not a superphosphoric acid plant. According to section 60.211: "Superphosphoric acid plant means any facility which concentrates wet-process phosphoric acid to 66 percent or greater P₂O₅ content by weight for eventual consumption as a fertilizer." The installation no longer makes phosphoric acid using a thermal process, which is not used in fertilizers.

40 CFR Part 60, Subpart V, *Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants*

This regulation does not apply because the installation is not a diammonium phosphate plant. According to section 60.221: "Granular diammonium phosphate plant means any plant manufacturing granular diammonium phosphate by reacting phosphoric acid with ammonia." The installation does not react phosphoric acid with ammonia.

40 CFR Part 60, Subpart W, *Standards of Performance for the Phosphate Fertilizer Industry: Triple Superphosphate Plants*

This regulation does not apply because the installation is not a triple superphosphate plant. According to section 60.231: "Triple superphosphate plant means any facility manufacturing triple superphosphate by reacting phosphate rock with phosphoric acid." The installation does not react phosphate rock with phosphoric acid.

40 CFR Part 60, Subpart X, *Standards of Performance for the Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities*

This regulation does not apply because the installation is not a triple superphosphate storage facility. The installation does not manufacture triple superphosphate.

40 CFR Part 60, Subpart RRR, *Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes*

This regulation does not apply because the installation does not produce any of the chemicals listed in §60.707 as a product, co-product, by-product, or intermediate.

Maximum Achievable Control Technology (MACT) Applicability Issues

40 CFR Part 63, Subpart T, *National Emission Standards for Halogenated Solvent Cleaning*

This regulation does not apply to this facility because all parts washers use aqueous solutions. All old parts cleaners that used solvents have been removed.

40 CFR Part 63, Subpart BB, *National Emission Standards for Hazardous Air Pollutants From Phosphate Fertilizers Production Plants*

This regulation does not apply because the installation does not produce phosphate fertilizer.

40 CFR Part 63, Subpart GGG, *National Emission Standards for Pharmaceuticals Production*

This regulation does not apply because the installation does not manufacture any pharmaceutical products as defined in §63.1251.

40 CFR Part 63, Subparts F, G, H and I, *Hazardous Organic NESHAP (HON)*

These regulations do not apply because the installation does not manufacture as a primary product one or more of the chemicals listed in §63.100(b)(1)(i) or (b)(1)(ii).

40 CFR Part 63 Subpart Q

Cooling Tower (EP-109) is exempt from this regulation, since the plant will not use a chromium-based water treatment system.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability

None

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 Collection 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 Collection Device to achieve compliance with a relevant standard.

Due to the wording of the process weight rule (10 CSR 10-6.400) none of the sources potentially subject to CAM have an applicable emission limit, other than visible emissions. Therefore, none of the sources at ICL are subject to CAM.

EP-98 South Lime Silo

Emission rate: 42.19 lb/hr

Annual PTE: 185 tons PM/year

Collection Device: CD-58 Dust Collector

Collection Device Efficiency: 99%

CAM Analysis: Enforceable requirement for collection device with > 90% efficiency, therefore not subject to emission limitation and not subject to CAM.

EP-106 KP Product Handling

Emission Rate: 62.5 lb/hr

Annual PTE: 274 tons PM/year

Collection Device: CD-67 Wet Scrubber

Collection Device Efficiency: 99%

CAM Analysis: Enforceable requirement for collection device with > 90% efficiency, therefore not subject to emission limitation and not subject to CAM.

EP-107 KP Dryer

Emission Rate: 187.5 lb/hr

Annual PTE: 821 tons PM/year

Collection Device: CD-68 Ducon Wet Scrubber

Collection Device Efficiency: 99%

CAM Analysis: Enforceable requirement for collection device with > 90% efficiency, therefore not subject to emission limitation and not subject to CAM.

EP-110 TKPP Filter Receiver

Emission Rate: 375 lb/hr

Annual PTE: 1,643 tons PM/year

Collection Device: CD-71 Baghouse Dust Collector

Collection Device Efficiency: 99%

CAM Analysis: Enforceable requirement for collection device with > 90% efficiency, therefore not subject to emission limitation and not subject to CAM.

Updated Potential to Emit for the Installation

Pollutant	Potential to Emit (tons/year) ²⁴
CO	164
HAP	--
NO _x	150
PM ₁₀	94
PM _{2.5}	89
SO _x ²⁵	0.5
VOC	34
GHG _{mass}	160
CO _{2eq}	160

Other Regulatory Determinations

10 CSR 10-6.405, *Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*

This rule was not applied to New Boiler No. 1 (EP-13) because the unit is subject to 10 CSR 10-6.070 (40 CFR Part 60, Subpart Dc). Section (1)(F) of the rule states that the regulation shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070.

The permittee shall not emit particulate matter in excess of 0.29 pounds per mmBtu of heat input from EP-13.

10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds*

This rule was not applied to New Boiler No. 1 (EP-13) because the unit is subject to 10 CSR 10-6.070 (40 CFR Part 60, Subpart Dc). Section (1)(A) of the rule states that the regulation shall not apply to emission sources subject to the provisions of 10 CSR 10-6.070.

This rule was not applied to the sulfuric acid storage tank (EP-86). Sulfuric Acid tank EP-86 has been abandoned since 2007.

This rule was not applied to EP-18 (STPP mill, cooler, IMP mill #1, IMP mill #2; Equipped with 20 mmBtu per hour natural gas process burner; put in service in 1957, process burner in 1983, CD-06, Mist Eliminator). The permittee uses only pipeline grade natural gas. The rule provides the follow-up exemption:

²⁴ Each emission unit was evaluated at 8,760 hours of uncontrolled annual operation unless otherwise noted.

²⁵ Based on the fuel oil combustion capability has been removed from the boilers

(1) Applicability.

(A) This rule applies to any installation that is an emission source of sulfur compounds, except—

2. Combustion equipment that uses exclusively pipeline grade natural gas as defined in 40 CFR 72.2. or liquefied petroleum gas as defined by American Society for Testing and Materials (ASTM), or any combination of these fuels.

10 CSR 10-6.400 *Restriction of Emission of Particulate Matter From Industrial Processes*

Enclosure B, following this Statement of Basis, contains an analysis of the particulate matter sources at the installation. Columns 9, 10, 11 and 12 show the results of the analysis. Columns 9, 10 and 11 are specific exemptions available in the rule, while column 12 is a declaration of compliance. The enclosure shows all emission units are in compliance or exempt.

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

This rule was not applied to the list of equipment above that has the potential to emit particulate matter at a rate less than 0.5 pounds per hour. It is highly unlikely that these units would ever exceed the 20% opacity threshold required by the rule.

This rule was not applied to New Boiler No. 1 (EP-13) because the unit is subject to 10 CSR 10-6.070 (40 CFR Part 60, Subpart Dc). Section (1)(H) of the rule states that the regulation shall not apply to emission sources subject to the provisions of 10 CSR 10-6.070.

Emission Unit Labeling Changes

EU_ID	DESCRIPT	OP2004-005 Designation	Removed
EP-003	ACID PLANT ABSORBER	EU0510-530	Yes
EP-004	CRUDE ACID TANK	Insignificant	
EP-009	ADJUSTING TANKS	Insignificant	
EP-011	FUEL OIL TANKS	Insignificant	
EP-013	BOILER STACKS	EU0010	
EP-014	STPP REACTOR	EU0540-570	
EP-015	NO. 1,2,3 STP DRYERS	Insignificant	
EP-016	NO. 4,5,6 STP DRYERS	EU0580-600	
EP-017	NO. 7,8 STP DRYERS	EU0610-620	
EP-018	STPP BRINKS	EU0030, EU0630-670	
EP-019	STPP GRANULAR	EU0680-730	
EP-021	BULK STP LOADING	EU0040	Yes
EP-022	STPP FLUIDIZER	Insignificant	
EP-025	STPP REMELT SYSTEM	Insignificant	
EP-026	LIME SILO & CRUSHING	EU0452-454	
EP-027	LIME SLAKING	Insignificant	Yes
EP-028	MCP REACTOR	Insignificant	Yes
EP-029	MCP DRYER	EU0790-820	Yes

EU_ID	DESCRIPT	OP2004-005 Designation	Removed
EP-029	MCP DRYER (Burner)	Insignificant	Yes
EP-030	MCP ROOTS BLOWER SYSTEM	EU0050	
EP-031	MCP SEPARATOR	EU0150-240	
EP-032	TCP REWORK SYSTEM	EU0250	
EP-033	TCP REWORK TANK	Insignificant	
EP-034	DCP PREMIX REACTOR A	Insignificant	
EP-035	DCP MILL	EU0260-320	
EP-035	DCP MILL (Burner)	Insignificant	
EP-036	TCP/TMP WET MIX TANK	Insignificant	
EP-038	TCP HOLD TANK	Insignificant	
EP-039	NO. 1&2 TCP DRYER	EU0830-840	
EP-040	NO. 3&4 TCP DRYER	EU0850-860	
EP-041	NO. 5 TCP DRYER	Insignificant	
EP-042	TCP IMP MILL	EU0060	
EP-042	TCP IMP MILL (Burner)	Insignificant	
EP-043	TCP BLENDERS & PACKERS	EU0070-120	
EP-044	UNMILLED TCP PACKING	Insignificant	
EP-045	ALUMINA SILO	EU0870-880	
EP-046	MCPA LIME CRUSHER	EU0130	
EP-047	MCPA LIME TRANSFER	Insignificant	
EP-048	MCPA/SALP REACTOR	Insignificant	
EP-049	MCPA/SALP MIXER	EU0890	
EP-050	MCPA/SALP CONVEYOR	EU0900-960	
EP-051	MCPA STEAM GENERATOR	Insignificant	
EP-052	MCPA/SALP FLUIDIZER	EU0140	
EP-053	CALCIUM PHOSPHATE PACKING	EU0970-1040	
EP-054	CALCIUM PHOSPHATE BAGS	EU0330-340	
EP-055	PACKAGING VACUUM SYSTEM	Insignificant	
EP-057	HYDROCHLORIC ACID (HCl) TANK	Insignificant	
EP-058	MAINTENANCE PARTS WASHERS	EU1090-1100	Yes
EP-060	PHOSPHORUS STORAGE TANK	Insignificant	Yes
EP-061	MCP PACKING BIN	EU0350	
EP-062	SEMI-BULK BAG PACKING BIN	EU0360	
EP-063	STPP PACKING DUST COLLECTOR	EU0370	
EP-064	STPP BIN VENT (WEST)	EU0380	
EP-065	DEPT. 20 PACKING BIN	Insignificant	
EP-066	STPP BIN VENT (EAST)	EU0390	

EU_ID	DESCRIPT	OP2004-005 Designation	Removed
EP-067	DCP SEMI-BULK	EU0410	
EP-068	D99 BAG PACKING BIN	EU0400	
EP-069	NASH VACUUM SYSTEM	Insignificant	Yes
EP-070	STPP OVERSIZE RECEIVER BIN	EU0420	
EP-071	STPP MILL RECEIVER BIN	EU0430	
EP-072	SHMP PACKING	EU0440-450	
EP-073	DCP WET MIX TANKS	Insignificant	
EP-074	TSPP TANK	Insignificant	
EP-075	ACID TANK 1	Insignificant	
EP-076	ACID TANK 6	Insignificant	
EP-077	ACID TANK 10	Insignificant	Yes
EP-078	ACID TANK 24	Insignificant	
EP-079	ACID TANK 54 (75% ACID SHIPPING TANK)	Insignificant	
EP-080	ACID TANK 51 (85% ACID SHIPPING TANK)	Insignificant	
EP-081	ADJUSTING TANKS SUMP	Insignificant	
EP-083	GASOLINE TANK	Insignificant	
EP-085	MCPA/SALP FLUIDIZER BURNER	Insignificant	
EP-086	SULFURIC ACID TANK	Insignificant	
EP-087	SODA ASH UNLOADING	EU0502-504	
EP-088	LIME UNLOADING	Insignificant	Yes
EP-089	Acid Loading Road (paved)	Insignificant	
EP-090	ACID SHIPPING TANK #60	Insignificant	
EP-092	D20 SOUTH REACTOR	EU0460	
EP-093	D20 SOUTH MIXER	EU0470-480	
EP-094	D20 SOUTH MILL	EU0490-500	
EP-095	STP Cooling Tower	EU1080	Yes
EP-096	NEW BOILER #1	EU0020	
EP-097	NAK PACKER VACUUM SYSTEM	Insignificant	
EP-098	SOUTH LIME SILO	EU0455	
EP-099	LIME PREMIX RECEIVING BIN	EU0456	
EP-100	PYRAN LIME SILO	EU0457	
EP-101	SODA ASH & STPP TRANSFER SYSTEM	NA	
EP-102	STPP PACKING BIN RECEIVER BIN VENT DC	NA	
EP-103	STPP SEMI-BULK FEED BIN VENT DC	NA	
EP-104	STPP TRANSFER SYSTEM VENT	NA	
EP-105	TCP FINES DC	NA	

EU_ID	DESCRIPT	OP2004-005 Designation	Removed
EP-106	KP DUST SCRUBBER SYSTEM	NA	
EP-107	KP DRYER SCRUBBER (WET END VESTIBULE SCRUBBER)	NA	
EP-108	KP REACTOR DEMISTER	NA	
EP-109	COOLING TOWER – OPEN WET	NA	
EP-110	TKPP TRUCK UNLOADING FILTER RECEIVER	NA	
EP-111	TKPP BAG DUMP STATION	NA	
EP-112	TKPP MIX TANK	NA	
EP-113	EMERGENCY GENERATOR	NA	

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).

Enclosure A

Old Attachment T (continued)

The following table can be used to verify compliance with the limit of 0.3 grains/dscf:

Emission rate (gr/dscf) = Emission Rate (lb/hr)*7000 (grains/lb)/Stack flow rate (scfm)/60(min/hr)

Flow rates converted from actual to standard conditions using the ideal gas law.

Emission Point	Associated Equipment	Potential Emission Rate (lb/hr)	Stack Temp. °F	Stack Flow Rate ACFM	Stack Flow Rate SCFM	Potential Emission Rate (gr/scf)	Emission Rate Limit (gr/scf)
EP-18	STPP Calciner	12.2	122	31544	28617	0.05	0.3
EP-03	Acid Plant Absorber Acid Plant Dilution Tank Acid Plant Combustion Chamber	0.52	120	2912	2651	0.023	0.3
EP-14	STP Reactor #1 STP Reactor #2 STP Premix and Mix Tank STP Drum Dryer Feed Tank	2.26	190	20710	16823	0.016	0.3
EP-16	No. 4 STP Drum Dryer No. 5 STP Drum Dryer No. 6 STP Drum Dryer	0.90	148	9540	8285	0.013	0.3
EP-17	No. 7 STP Drum Dryer No. 8 STP Drum Dryer	0.50	167	12611	10620	0.005	0.3
EP-18	STP Dryer STP Mill STP Cooler STP Imp Mill #1 STP Imp Mill #2	12.2	122	31544	28617	0.05	0.3
EP-19	STP Granular Silo #1 STP Granular Silo #2 STP Granular Silo #3 STP Granular Silo #4 STP Swecos STP Separator	1.56	106	2400	2239	0.081	0.3
EP-29	MCP Slurry Feed Tank MCP Aging Bin #1 MCP Aging Bin #2 MCP Aging Bin #3	0.83	174	12740	10610	0.009	0.3
EP-39	No. 1 TCP Drum Dryer No. 2 TCP Drum Dryer	1.01	171	5362	4487	0.026	0.3
EP-40	No. 3 TCP Drum Dryer No. 4 TCP Drum Dryer	3.99	158	3295	2815	0.166	0.3
EP-45	Alumina Weigh Bin Alumina Silo	2.20	80	1146	1121	0.23	0.3

Emission Point	Associated Equipment	Potential Emission Rate (lb/hr)	Stack Temp. °F	Stack Flow Rate ACFM	Stack Flow Rate SCFM	Potential Emission Rate (gr/scf)	Emission Rate Limit (gr/scf)
EP-49	MCPA/SALP Mixer	2.40	183	4802	3943	0.071	0.3
EP-50	MCPA/SALP Cut-In Station (to mixer) MCPA/SALP Oversize Mill MCPA/SALP Bin 30 MCPA/SALP Cut-In Station (to fluidizer) MCPA/SALP Bin 51 MCPA/SALP Cooler Screw MCPA/SALP Packing Bin	1.40	106	3057	2852	0.057	0.3
EP-53	Pyran/SALP Screening (#1) Pyran/SALP Screening (#2) MCP Surge Bin #1 MCP Surge Bin #2 MCP Bulk Loading (tank trucks) DCP Surge Bin #1 DCP Surge Bin #2 DCP Bulk Loading (rail cars)	1.42	77	17583	17288	0.01	0.3
EP-95	STP Cooling Tower	5.13	102	36000	33822	0.018	0.3

Enclosure B
(Note: values may be rounded)

EU	Description	Process Weight Rate (ton/hr)	PM Emission Factor (lb/ton)	Collection Device Efficiency (%)	Uncontrolled Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Allowable Emission Rate (lb/hr)	PTE is less than 0.5 lbs per hour? (with control / without control)	Is unit in compliance without controls?	Is the Control Efficiency Greater Than 90%?	Is unit in compliance with controls?	PTE as percentage of Allowable
EP-18	STPP Calciner	10.00	1.22	45.00	12.20	6.71	19.18	NO	YES	NO	YES	35%
EP-03	Acid Plant Absorber Acid Plant Dilution Tank Acid Plant Combustion Chamber	10.10	0.05	30.00	0.53	0.37	19.31	YES/w	YES	NO	YES	2%
EP-14	STP Reactor #1 STP Reactor #2 STP Premix and Mix Tank STP Drum Dryer Feed Tank	10.00	0.23	70.00	2.26	0.68	19.18	NO	YES	NO	YES	4%
EP-16	No. 4 STP Drum Dryer No. 5 STP Drum Dryer No. 6 STP Drum Dryer	2.50	0.36	70.00	0.90	0.27	7.58	YES/w	YES	NO	YES	4%
EP-17	No. 7 STP Drum Dryer No. 8 STP Drum Dryer	2.50	0.20	70.00	0.50	0.15	7.58	YES/w	YES	NO	YES	2%

EU	Description	Process Weight Rate (ton/hr)	PM Emission Factor (lb/ton)	Collection Device Efficiency (%)	Uncontrolled Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Allowable Emission Rate (lb/hr)	PTE is less than 0.5 lbs per hour? (with control / without control)	Is unit in compliance without controls?	Is the Control Efficiency Greater Than 90%?	Is unit in compliance with controls?	PTE as percentage of Allowable
EP-18	STP Dryer STP Mill STP Cooler STP Imp Mill #1 STP Imp Mill #2	10.00	1.22	45.00	12.20	6.71	19.18	NO	YES	NO	YES	35%
EP-19	STP Granular Silo #1 STP Granular Silo #2 STP Granular Silo #3 STP Granular Silo #4 STP Swecos STP Separator	10.00	0.16	95.00	1.56	0.08	19.18	YES/w	YES	YES	YES	0%
EP-29	MCP Slurry Feed Tank MCP Aging Bin #1 MCP Aging Bin #2 MCP Aging Bin #3	0.73	1.13	95.00	0.82	0.04	3.32	YES/w	YES	YES	YES	1%
EP-39	No. 1 TCP Drum Dryer No. 2 TCP Drum Dryer	5.33	2.01	29.46	10.71	7.56	12.58	NO	YES	NO	YES	60%
EP-40	No. 3 TCP Drum Dryer No. 4 TCP Drum Dryer	5.33	7.99	29.46	4.00	2.82	12.58	NO	YES	NO	YES	22%

EU	Description	Process Weight Rate (ton/hr)	PM Emission Factor (lb/ton)	Collection Device Efficiency (%)	Uncontrolled Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Allowable Emission Rate (lb/hr)	PTE is less than 0.5 lbs per hour? (with control / without control)	Is unit in compliance without controls?	Is the Control Efficiency Greater Than 90%?	Is unit in compliance with controls?	PTE as percentage of Allowable
EP-45	Alumina Weigh Bin Alumina Silo	22.00	0.10	95.00	2.20	0.11	32.52	YES/w	YES	YES	YES	0%
EP-49	MCPA/SALP Mixer	1.20	2.00	95.00	2.40	0.12	4.63	YES/w	YES	YES	YES	3%
EP-50	MCPA/SALP Cut-In Station (to mixer) MCPA/SALP Oversize Mill MCPA/SALP Bin 30 MCPA/SALP Cut-In Station (to fluidizer) MCPA/SALP Bin 51 MCPA/SALP Cooler Screw MCPA/SALP Packing Bin	1.20	1.17	95.00	1.40	0.07	4.63	YES/w	YES	YES	YES	2%

EU	Description	Process Weight Rate (ton/hr)	PM Emission Factor (lb/ton)	Collection Device Efficiency (%)	Uncontrolled Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Allowable Emission Rate (lb/hr)	PTE is less than 0.5 lbs per hour? (with control / without control)	Is unit in compliance without controls?	Is the Control Efficiency Greater Than 90%?	Is unit in compliance with controls?	PTE as percentage of Allowable
EP-53	Pyran/SALP Screening (#1) Pyran/SALP Screening (#2) MCP Surge Bin #1 MCP Surge Bin #2 MCP Bulk Loading (tank trucks) DCP Surge Bin #1 DCP Surge Bin #2 DCP Bulk Loading (rail cars)	12.00	0.12	95.00	1.42	0.07	21.67	YES/w	YES	YES	YES	0%
EP-26	LIME SILO & CRUSHING	14.00	1.50	95.00	21.00	1.05	24.03	NO	YES	YES	YES	4%
EP-30	MCP ROOTS BLOWER SYSTEM	12.50	0.19	95.00	2.38	0.12	22.27	YES/w	YES	YES	YES	1%
EP-32	DCP CUT-IN + PREMIX	1.68	0.01	95.00	0.02	0.00	5.79	YES/wo	YES	YES	YES	0%
EP-35	DCP MILL	3.80	0.42	95.00	1.58	0.08	10.03	YES/w	YES	YES	YES	1%
EP-42	TCP IMP MILL	1.56	0.46	95.00	0.72	0.04	5.52	YES/w	YES	YES	YES	1%
EP-43	TCP BLENDERS & PACKERS	1.56	1.28	95.00	2.00	0.10	5.52	YES/w	YES	YES	YES	2%
EP-46	MCPA LIME CRUSHER	22.00	0.23	95.00	5.13	0.26	32.52	YES/w	YES	YES	YES	1%

EU	Description	Process Weight Rate (ton/hr)	PM Emission Factor (lb/ton)	Collection Device Efficiency (%)	Uncontrolled Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Allowable Emission Rate (lb/hr)	PTE is less than 0.5 lbs per hour? (with control / without control)	Is unit in compliance without controls?	Is the Control Efficiency Greater Than 90%?	Is unit in compliance with controls?	PTE as percentage of Allowable
EP-52	MCPA/SALP FLUIDIZER	4.33	0.32	95.00	1.40	0.07	10.95	YES/w	YES	YES	YES	1%
EP-54	CALCIUM PHOSPHATE BAGS	12.00	0.06	95.00	0.70	0.03	21.67	YES/w	YES	YES	YES	0%
EP-61	MCP PACKING BIN	10.50	0.01	99.90	0.05	0.00	19.81	YES/wo	YES	YES	YES	0%
EP-62	SEMI-BULK BAG PACKING BIN	10.50	0.32	99.90	3.33	0.00	19.81	YES/w	YES	YES	YES	0%
EP-63	STPP PACKING DUST COLLECTOR	10.08	0.32	99.70	3.19	0.01	19.28	YES/w	YES	YES	YES	0%
EP-64	STPP BIN VENT (WEST)	10.00	0.00	99.90	0.00	0.00	19.18	YES/wo	YES	YES	YES	0%
EP-66	STPP BIN VENT (EAST)	10.00	0.00	95.00	0.00	0.00	19.18	YES/wo	YES	YES	YES	0%
EP-68	D99 BAG PACKING BIN	10.50	0.32	99.70	3.33	0.01	19.81	YES/w	YES	YES	YES	0%
EP-70	STPP OVERSIZE RECEIVER BIN	4.00	0.02	95.00	0.07	0.00	10.38	YES/wo	YES	YES	YES	0%
EP-71	STPP MILL RECEIVER BIN	6.00	0.02	95.00	0.10	0.01	13.62	YES/wo	YES	YES	YES	0%

EU	Description	Process Weight Rate (ton/hr)	PM Emission Factor (lb/ton)	Collection Device Efficiency (%)	Uncontrolled Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Allowable Emission Rate (lb/hr)	PTE is less than 0.5 lbs per hour? (with control / without control)	Is unit in compliance without controls?	Is the Control Efficiency Greater Than 90%?	Is unit in compliance with controls?	PTE as percentage of Allowable
EP-72	SHMP PACKING	25.00	0.32	99.70	7.92	0.02	35.43	YES/w	YES	YES	YES	0%
EP-87	SODA ASH UNLOADING	30.00	0.10	-	3.00	3.00	40.04	NO	YES	NO	YES	7%
EP-92	D20 SOUTH REACTOR	1.13	0.08	98.10	0.09	0.0018	4.46	YES/wo	YES	YES	YES	0%
EP-93	D20 SOUTH MIXER	1.13	0.22	95.00	0.25	0.021	4.46	YES/wo	YES	YES	YES	0%
EP-94	D20 SOUTH MILL	1.13	0.22	95.00	0.25	0.021	4.46	YES/wo	YES	YES	YES	0%
EP-98	SOUTH LIME SILO	22.50	1.88	99.00	42.19	0.42	33.02	YES/w	NO	YES	YES	1%
EP-99	LIME PREMIX RECEIVING BIN	7.50	2.75	99.00	20.63	0.21	15.82	YES/w	NO	YES	YES	1%
EP-100	PYRAN LIME SILO	22.50	1.50	99.00	33.75	0.34	33.02	YES/w	NO	YES	YES	1%
EP-104	STPP TRANSFER SYSTEM VENTS	15.00	0.08	98.00	1.16	0.02	25.16	YES/w	YES	YES	YES	0%
EP-106	KP DUST SCRUBBER SYSTEM	1.91	62.50	99.00	119.38	1.19	6.33	NO	NO	YES	YES	19%
EP-107	KP DRYER SCRUBBER (WET END VESTIBULE SCRUBBER)	6.00	187.50	99.00	1,125.00	11.25	13.62	NO	NO	YES	YES	83%

EU	Description	Process Weight Rate (ton/hr)	PM Emission Factor (lb/ton)	Collection Device Efficiency (%)	Uncontrolled Emission Rate (lb/hr)	Controlled Emission Rate (lb/hr)	Allowable Emission Rate (lb/hr)	PTE is less than 0.5 lbs per hour? (with control / without control)	Is unit in compliance without controls?	Is the Control Efficiency Greater Than 90%?	Is unit in compliance with controls?	PTE as percentage of Allowable
EP-108	KP REACTOR DEMISTER	6.00	1.22	94.00	7.30	0.44	13.62	YES/w	YES	YES	YES	3%
EP-109	COOLING TOWER – OPEN WET	191.00	0.03	90.00	6.05	0.60	58.01	NO	YES	YES	YES	1%
EP-110	TKPP TRUCK UNLOADING FILTER RECEIVER	30.00	50.00	99.00	1,500.00	15.00	40.04	NO	NO	YES	YES	37%
EP-111	TKPP BAG DUMP STATION	3.00	20.00	99.00	60.00	0.60	8.56	NO	NO	YES	YES	7%
EP-112	TKPP MIX TANK	33.00	20.00	99.00	660.00	6.60	40.80	NO	NO	YES	YES	16%