



Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137



Federally Enforceable District Origin Operating Permit (FEDOOP)

Permit No.: O-1584-16-F

Plant ID: 1584

Effective Date: xx/xx/2016

Expiration Date: xx/xx/2021

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Owner: BYK Additives Inc.

Source: BYK Additives Inc. Louisville Facility

1335 South 13th Street

Louisville, KY 40232

The applicable procedures of District Regulation 2.17 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than twelve (12) months and no later than ninety (90) days prior to the expiration date.

Application Number: 10290

Application Received: 5/18/2006

Public Notice Date: 7/8/2016

Administratively Complete: 7/18/2006

Permit Writer: Jenny Rhodes

{Manager1}

Air Pollution Control Officer

{date1}

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FEDOOP Permit Revisions/Changes

Revision No.	Issue Date	Public Notice	Type	Page No.	Description
NA	x/x/2015	07/08/16	Initial	Entire Permit	Initial Permit Issuance

Construction Permit History

Permit No.	Issue Date	Description
C-1584-1004-16-F	07/05/2016	Disconnecting scrubber WS3B associated with North and south spray dryers (V-16 and V-16A) to be replaced with additional filter cake washing (F-1 and F-1A), North System Premix Tank (V-9), and Clay storage silos V1 and V2.
C-1584-1003-15-F	06/01/15	One (1) 10,000 gallon Quaternary Amine Storage Tank (V-3NA) that will be part of the Tixogel Plant emission unit.
C-1584-1002-14-F	10/17/14	Two (2) hoppers designated as H-60 and H-61 controlled by existing dust collector DC-210
50-09-C	2/28/09	Two (2) Filter Receivers, two (2) bagging machines, and one (1) storage bin with two surge hoppers.
74-07-C	9/30/08	One (1) eight stage wet scrubber

Acronyms and Abbreviations

AP-42	- AP-42, <i>Compilation of Air Pollutant Emission Factors, published by U.S.EPA</i>
APCD	- Louisville Metro Air Pollution Control District
BAC	- Benchmark Ambient Concentration
BACT	- Best Available Control Technology
Btu	- British thermal unit
CEMS	- Continuous Emission Monitoring System
CFR	- Code of Federal Regulations
CO	- Carbon monoxide
District	- Louisville Metro Air Pollution Control District
EA	- Environmental Acceptability
gal	- U.S. fluid gallons
GHG	- Greenhouse Gas
HAP	- Hazardous Air Pollutant
HCl	- Hydrogen chloride
Hg	- Mercury
hr	- Hour
in.	- Inches
lbs	- Pounds
l	- Liter
LMAPCD	- Louisville Metro Air Pollution Control District
mmHg	- Millimeters of mercury column height
MM	- Million
NAICS	- North American Industry Classification System
NO _x	- Nitrogen oxides
PM	- Particulate Matter
PM ₁₀	- Particulate Matter less than 10 microns
PM _{2.5}	- Particulate Matter less than 2.5 microns
ppm	- parts per million
PSD	- Prevention of Significant Deterioration
psia	- Pounds per square inch absolute
QA	- Quality Assurance
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO ₂	- Sulfur dioxide
STAR	- Strategic Toxic Air Reduction
TAC	- Toxic Air Contaminant
UTM	- Universal Transverse Mercator
VOC	- Volatile Organic Compound
w.c.	- Water column
year	- Any period of twelve consecutive months, unless "calendar year" is specified
yr	- Year, or any 12 consecutive-month period, as determined by context

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

1. The owner or operator shall comply with all General Conditions herein and all terms and conditions in the referenced process/process equipment list.
2. All terms and conditions in this FEDOOP are enforceable by EPA, except those terms and conditions specified as District-only enforceable, and those which are not required pursuant to the Clean Air Act Amendments of 1990 (CAAA) or any of the Act's applicable requirements.
3. All application forms, reports, compliance certifications, and other relevant information submitted to the District shall be certified by a responsible official. If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.
4. The owner or operator shall submit an annual compliance certification, signed by the responsible official, to the District, on or before April 15 of the year following the year for which the certification applies. This certification shall include completion of District Form 9440-O.
5. Periodic testing, instrumental monitoring, or non-instrumental monitoring, which may include record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstrating continuing compliance with the terms and conditions of this permit.
6. The owner or operator shall retain all records required by the District or any applicable requirement, including all required monitoring data and supporting information, for a period of five years from the date of the monitoring, sampling, measurement, report, or application, unless a longer time period for record retention is required by the District or an applicable requirement. Records shall be retrievable within a reasonable time and made available to the District, Kentucky Division for Air Quality, or the EPA upon request.
7. The owner or operator shall provide written notification to the District, and receive approval, prior to making any changes to existing equipment or processes that would result in emissions of any regulated pollutant in excess of the allowable emissions specified in this permit.
8. This permit may be reissued, revised, reopened, or revoked pursuant to District Regulation 2.17. Repeated violations of permit conditions are sufficient cause for revocation of this permit. The filing of a request by the owner or operator for any reissuance, revision, revocation, termination, or a notification of planned changes in equipment or processes, or anticipated noncompliance shall not alter any permit requirement.
9. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed either 10 tons per year, or such lesser quantity as the EPA has established by rule, of any one Hazardous Air Pollutant (HAP) or 25 tons per year of all HAPs combined. Fugitive HAP emissions shall be included in this limit. HAPs are listed in Section 112(b) of the CAAA and as amended in 40 CFR 63, Subpart C.

10. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed 100 tons per year of any regulated pollutant, including particulate matter, PM₁₀, PM_{2.5}, sulfur dioxide, carbon monoxide, nitrogen oxides, lead, hydrogen sulfide, gaseous fluorides, total fluorides, or Volatile Organic Compounds (VOC); any pollutant subject to any standard in District Regulation 7.02; any substance listed in sections 112(r), 602(a) and 602(b) of the CAAA; or any combination of greenhouse gasses whose combined global warming potential equals or exceeds 100,000 tons CO₂-equivalent, as defined in 40 CFR 98). Fugitive emissions shall be included in these limits for source categories listed in District Regulation 2.16.
11. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.
12. Unless specified elsewhere in this permit, the owner or operator shall submit annual reports demonstrating compliance with the emission limitations specified. The report shall contain monthly and consecutive 12-month totals for each pollutant that has a federally enforceable limitation on the potential to emit. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All annual compliance reports shall include the statement "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete" and the signature and title of a responsible official of the company. The report must be postmarked no later than March 1 of the year following the calendar year covered in the annual report.
13. The owner or operator shall comply with all applicable requirements of the following federally enforceable District Regulations:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance with Emissions Standards and Maintenance Requirements
1.06	Source Self-Monitoring, Emissions Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.07	Public Notification for Title V, PSD, and Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Modification, Revocation, or Suspension

Regulation	Title
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.17	Federally Enforceable District Origin Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions

14. The owner or operator shall comply with all applicable requirements of the following District-only enforceable regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors in the Ambient Air
2.08	Fees
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption of Federal New Source Performance Standards

15. The owner or operator shall submit emission inventory reports, as required by Regulation 1.06, if so notified by the District.
16. The owner or operator shall submit timely reports of abnormal conditions or operational changes that may cause excess emissions, as required by Regulation 1.07.
17. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit shall be submitted to:

***Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137***

Plant-Wide Specific Conditions**S1. Standards** (Regulation 2.17, section 5.1)**a. PM/PM₁₀/PM_{2.5}**

The owner or operator shall not allow or cause the plant-wide PM/PM₁₀/PM_{2.5} emissions to equal or exceed 100 tons during any consecutive 12-month period. (Regulation 2.17, section 5.1)

b. Opacity

The owner or operator shall not allow or cause visible emissions to equal or exceed 20% opacity from any PM emission point. (Regulation 7.08, section 3.1.1)

c. TAC

i. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be *de minimis*. (Regulations 5.00 and 5.21) (See Comment 1)

ii. The owner or operator shall submit with the notification of construction for any new emission unit the STAR EA Demonstration for all Category 1 through Category 4 TACs emitted from that emission unit.

iii. The owner or operator shall submit a *plant-wide* emissions-based EA Demonstration to the District showing compliance with the *plant-wide* EA goals of 7.5 for new and existing, 3.8 for all new combined, and 1.0 for each TAC from each process when a change occurs that increases emissions above *de minimis* or previously modeled values.

iv. If the TAC does not have an established BAC or *de minimis* value, the owner or operator shall calculate and report these values.

S2. Monitoring and Record Keeping (Regulation 2.17, section 5.2)

The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.

a. PM/PM₁₀/PM_{2.5}

i. For each PM emission point, the owner or operator shall monitor and maintain records of the throughput of each raw material during each calendar month and each consecutive 12-month period.

ii. The owner or operator shall monthly calculate and record the plant-wide monthly and consecutive 12-month PM/PM₁₀/PM_{2.5} emissions, including calculations, for each month in the reporting period.

b. Opacity

i. For each PM emission point, the owner or operator shall conduct a monthly one-minute visible emissions survey during normal process operation and daylight hours. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is wholly within a building.

- ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.
- iii. The owner or operator shall maintain monthly records of the results of all Visible Emissions (VE) Surveys and Methods 9 tests performed. The records shall include the date of each VE survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

c. **TAC**

- i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to SDS, analysis of emissions, and/or modeling results.
- ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases above *de minimis* at the time of the change.

S3. **Reporting** (Regulation 2.17, section 5.2)

The owner or operator shall submit annual compliance reports in accordance with General Condition 12.

a. **PM/PM₁₀/PM_{2.5}**

The owner or operator shall report the plant-wide monthly and consecutive 12-month PM/PM₁₀/PM_{2.5} emissions for each month in the reporting period.

b. **Opacity**

- i. The date and time of each VE Survey where visible emissions were observed and the results of the Method 9 test performed;
- ii. Identification of all periods of exceeding the opacity standard;
- iii. Description of any corrective action taken for each exceedance of an opacity standard specified in this permit; and
- iv. Any deviation from the requirement to perform or record the results of the required monthly VE surveys or Method 9 tests.

c. **TAC**

- i. The owner or operator shall report any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration or a negative declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.
- ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these conditions comply with the STAR

program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze. (Regulation 5.21 sections 4.22 – 4.24)

- iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months after a change of a raw material.

Comments for Plant-Wide Requirements

1. The current *de minimis* levels:

TAC	CAS #	De Minimis Levels			
		lb/yr	lb/Avg. Period	lb/hr	Avg. Period
Benzyl Chloride	100-44-7	9.6	---	0.011	8 hr
Diethylene Glycol Monobutyl Ether	112-34-5	876.00	2.40	1.00	24 hr
Dicyclohexylmethane-4,4-diisocyanate	5124-30-1	24.09	0.022	0.022	8 hr
Isophorone Diisocyanate	4098-71-9	9.86	0.0090	0.0090	8 hr
Methanol	67-56-1	9600000	9600000	10800	Annual
Methyl Chloride	74-87-3	43,200	43,200	48.60	Annual
Sulfuric Acid	7664-93-9	480.00	480.00	0.54	Annual
Tetramethylxylene diisocyanate ¹	277-42-9	--	--	0.009	--

¹ The *de minimis* level is based on NIOSH Occupational Exposure Level (OEL) NIOSH REL of 0.005 ppm (0.045 mg/m³) (1 ppm = 9.09 mg/m³) (BAC_{NC} = 45.45/100 = 0.545 ug/m³) (De Minimis lb/hr = BAC_{NC} x 0.02 = 0.009 lb/hr).

Tixogel Manufacturing Operations (TIX)

Raw bentonite clay is transferred from railcar to silos and made into an aqueous solution that is mechanically purified, then reacted with a quaternary ammonium salt, filtered, dried (in two 5 MMBtu/hr natural-gas-fired driers) and packaged.

TIX Applicable Regulations

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
7.08	Standards of Performance for New Process Operations	1 through 3
7.12	Standards of Performance for New Storage Vessels for Volatile Organic Compounds	1, 2, 3.3, 5, 7, 8
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	1 through 5

District Only Enforceable Regulations		
Regulation	Title	Applicable Sections
5.00	Definitions	1 through 2
5.01	General Provisions	1 through 4
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

TIX Emission Points²

EP TIX-	ID/Description	Applicable Regulation(s)	Control Device	Stack ID
1	South Spray Dryer, V-16, 5 MMBtu/hr natural gas fired unit, 08/80, with VOC reduction achieved through additional filter cake washing in Filter Press F1	5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.08, 7.25	DC-3& FP V-16	S-430-TIX-001
2	North Spray Dryer, V-16A, 5 MMBtu/hr natural gas fired unit, 08/86, with VOC reduction achieved through additional filter cake washing in Filter Press F1A		DC-3A & FP V-16A	S-430-TIX-002
3	Two (2) Premix Tanks (North System), V-9 (2016) & V-10 (08/80), 5900 gal ea.,	5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 7.25	NA	S-430-TIX-003
4	South System Premix Tank, V-9A, 5900 gal, 08/89		NA	S-430-TIX-004
5	South System Premix Tank, V-10A, 5900 gal, 08/89		NA	S-430-TIX-005
6	South Storage Hopper, Bag Adjust, Rework Addition	7.08	DC-4	S-430-TIX-006
7	North Storage Hopper, Bagging Machine, Bag	7.08	DC-4A	S-430-TIX-007

² The Prater Mill System (EP 15, 16 and 17) was decommissioned, reported in a July 27, 2011 letter from the company. Also, the Railcar unloading (and associated baghouse DC-5) has been decommissioned.

EP TIX-	ID/Description	Applicable Regulation(s)	Control Device	Stack ID
	Adjust, Rework Addition, 08/86			
8	Storage Bin and Clay Suspension Tank, V-4, 3000 lb/hr, 08/80	7.08	DC-2	S-430-TIX-008
9	Two (2) Clay Storage Silos, V1 & V2, w/ conveyor system, 27,000 lb/hr, 08/80	7.08	DC-1	S-430-TIX-009
11	Four (4) Coagulator Tanks (South System) V-11, 12, 13, 14, 7000 gal ea., 08/89	5.00, 5.01, 5.20, 5.21,	NA	S-430-TIX-011
12	Four (4) Coagulator Tanks (North System), V-11A, 12A, 13A, 14A, 7000 gal ea., 08/80	5.22, 5.23, 7.25	NA	S-430-TIX-012
13	South Bag-Dump Station, Blender, Bagging Machine	7.08	DC-6	S-430-TIX-013
14	One (1) Quat Storage Tank, V-3S, 10,000 gal	7.12	NA	S-430-TIX-014S
	One (1) Quat Storage Tank, V-3N, 10,000 gallons.	5.00, 5.01, 5.20, 5.21,	NA	S-430-TIX-014N
	One (1) Quat Storage Tank, V-3NA, 10,000 gallons	5.22, 5.23	NA	S-204-TIX-018
19	South Filter Receiver for product convey system, DC-7, 1000 lb/hr, 01/09	7.08	NA	S-430-TIX-017
20	North Filter Receiver for product convey system, DC-7A, 1000 lb/hr, 01/09	7.08	NA	S-430-TIX-017
21a	South Compartment of Transition Hopper for product convey system, 1000 lb/hr, 01/09	7.08	DC-7	S-430-TIX-017
21b	North Compartment of Transition Hopper for product convey system, 1000 lb/hr, 01/09	7.08	DC-7A	S-430-TIX-017
22	South Bagging Machine (air packer) for product convey system, 1000 lb/hr, 01/09	7.08	DC-7	S-430-TIX-017
23	North Bagging Machine (air packer) for product convey system, 1000 lb/hr, 01/09	7.08	DC-7A	S-430-TIX-017
24	Hopper H-60	7.08	DC-210	S-430-MGL-001
25	Hopper H-61	7.08		

TIX Control Devices

ID	Description	Stack ID
DC-3	Mikropul 238S-10-20TR	S-430-TIX-001
DC-3A	Mikropul 238S-10-20TR	S-430-TIX-002
DC-4	Mikropul 81S-8-20	S-430-TIX-006
DC-4A	Mikropul 16S-8-30	S-430-TIX-007
DC-2	Flex-Kleen 36-CTBS-24 I	S-430-TIX-008
DC-1	Flex-Kleen 12-52-16163	S-430-TIX-009
DC-6	Flex-Kleen 84-BVBS-25 TTT	S-430-TIX-013
DC-7	Griffin Filter Receiver CV-7-PV20	S-430-TIX-017
DC-7A	Griffin Filter Receiver CV-7-PV20	S-430-TIX-017
DC-210	Flex Kleen Fabric Filter	S-431-MGL-001

TIX Specific Conditions

S1. Standards (Regulation 2.17, section 5.1)

a. PM/PM₁₀/PM_{2.5} (Regulation 2.17, section 5.1)

- i. The owner or operator shall not allow or cause the PM emissions from each piece of equipment to exceed the following limits based on actual operating hours in a calendar day. (Regulation 7.08) (C-1584-1004-16-F)

EP (TIX-)	Emission Limit (lb/hr) ³
1, 2, 6, 7, 13, 19 – 25	2.34
8	4.62
9	18.03

- ii. The owner or operator shall operate and maintain each control device at all times the associated process equipment is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice for minimizing emissions. (Regulation 2.17, section 5.1)
- iii. See Plant-Wide Specific Conditions S1.a.

b. Opacity

See Plant-Wide Specific Conditions S1.b.

c. NO_x

For EP TIX-1 (Spray Dryer V-16) and EP TIX-2 (Spray Dryer V-16A) each, the owner or operator shall not cause to be discharged into the atmosphere from any affected facility or from any air pollution control equipment installed on any affected facility any NO_x fumes in excess of 300 ppm by volume expressed as NO₂. (Regulation 7.08, section 4)⁴

d. VOC

- i. For affected facilities subject to Regulation 7.25 without a BACT,⁵ the owner or operator shall not allow or cause the plant-wide VOC emissions, including all additives, catalysts, solvents, and cleaners, to exceed 5 tons during any consecutive 12-month period, unless a BACT is submitted and approved by the District. (Regulation 7.25, section 3)
- ii. For EP TIX-1 (Spray Dryer V-16) and EP TIX-2 (Spray Dryer V-16A):
 - 1) The owner or operator shall not allow or cause the VOC emissions from this equipment to exceed 15.21 tons during any consecutive

³This equipment cannot exceed the Regulation 7.08 PM standard controlled.

⁴This equipment cannot exceed the Regulation 7.08 NO_x standard uncontrolled.

⁵Emission Points EP TIX-3, EP TIX-4, EPTIX-5, EPTIX-11, EPTIX-12, EPAT-2, EPAT-3, & EPMGL-2; and Insignificant Activities T-110, T-120, T-121, V-15 and V-15A do not have a BACT and are subject to the plant-wide 5 tpy Regulation 7.25 limit.

- 12-month period. (Regulation 7.25, section 3) (BACT)⁶
- 2) The owner or operator shall maintain water to the feed of the filter presses at least 40 gpm at all times the filter presses FP V-16 and FP V-16A are filling with water to enhance the ethanol removal through filtering. (Regulation 7.25, section 3) (BACT)
 - iii. For each VOC storage vessel, the owner or operator shall not store materials with an as stored vapor pressure of greater than or equal to 1.5 psia, unless it is equipped with a permanent submerged fill pipe. (Regulation 7.12, section 3.3)
- e. **TAC**
- See Plant-Wide Specific Condition S1.d. (Regulations 5.00 and 5.21)⁷
- S2. Monitoring and Record Keeping** (Regulation 2.17, section 5.2)
- The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.
- a. **PM/PM₁₀/PM_{2.5}**
 - i. The owner or operator shall perform a monthly visual inspection of the structural and mechanical integrity of each control device for signs of damage, air leakage, corrosion, or other equipment defects and repair and/or replace defective components within 15 calendar days after an equipment defect is observed. A first attempt at repair shall be made no later than 5 calendar days after the defect is observed. The owner or operator shall maintain monthly records of the date and results of all inspections, identification of any repairs made including the date an equipment defect was observed and the date of first attempt to repair the defect, the date of successful repair, and a description of any maintenance performed or replacement of defective components.
 - ii. For any period of time when a process was operating and the associated PM control device was not operating, the owner or operator shall maintain the following records:
 - 1) Date;
 - 2) The duration of the control device downtime including the start and stop time;
 - 3) Identification of the control device and process equipment;
 - 4) The process throughput during the control device downtime;
 - 5) The emissions of PM (lb/hr) and PM/PM₁₀/PM_{2.5} (tons); and
 - 6) Summary information on the cause of the event, corrective action

⁶The LMAPCD has determined that the process modification (filter press washing) meets Best Available Control Technology in accordance with 7.25 based on the BACT Analysis submitted on August 29, 2014 and the BACT Confirmation Letter submitted on May 19, 2015.

⁷The TAC emissions from the combustion of natural gas are considered to be “de minimis” emissions by the District. This includes all of the emissions from a process or process equipment for which the only emissions are the products of combustion of natural gas, such as from a natural gas-fired boiler, but does not include the other emissions from a process or process equipment that are not the products of the combustion of natural gas. (Regulation 5.21, section 2.7)

taken, and measures implemented to prevent reoccurrence.

- iii. The owner or operator shall monitor and record the pressure drop across each baghouse at least once per day during process operation to assure proper operation:

Control ID	Description	Pressure Drop (in. w.c.)
DC-1	Flex-Kleen 84-BVS-16 II	0.5 - 10.0
DC-2	Flex-Kleen 36-CTBS-24 I	1.0 - 10.0
DC-3	Mikropul 238S-10-20TR	1.0 - 10.0
DC-3A	Mikropul 238S-10-20TR	1.0 - 10.0
DC-4	Mikropul 81S-8-20	1.0 - 10.0
DC-4A	Mikropul 16S-8-30	1.0 - 10.0
DC-6	Flex-Kleen 84-BVBS-25 TTT	1.0 - 10.0
DC-7	Griffin Filter Receiver CV-7-PV20	2.0 – 6.0
DC-7A	Griffin Filter Receiver CV-7-PV20	2.0 – 6.0
DC-210	Flex Kleen Fabric Filter	1.0 - 10.0

- iv. For any period of operating outside the established pressure drop range for DC-1, DC-2, DC-3, DC-3A, DC-4, DC-4A, DC-6, DC-7, DC-7A, or DC-210 the owner or operator shall maintain the following records:

- 1) The date of the pressure excursion,
- 2) The observed pressure drop, and
- 3) Summary information on the cause of the event, corrective action taken, and measures implemented to prevent reoccurrence.

- v. See Plant-Wide Specific Conditions S2.a.

b. Opacity

See Plant-Wide Specific Conditions S2.b.

c. NOx

There are no monitoring or record keeping requirements for this pollutant.

d. VOC

- i. Each month, the owner or operator shall maintain records, including calculations, of the calendar month and consecutive 12-month plant-wide VOC emissions for affected facilities subject to Regulation 7.25 without a BACT.⁸
- ii. For V-16 and V-16A, the owner or operator shall calculate VOC emissions according to the following equation until another method is approved in writing by the District:

⁸ Emission Points EP TIX-3, EP TIX-4, EPTIX-5, EPTIX-11, EPTIX-12, EPAT-2, EPAT-3, & EPMGL-2; and Insignificant Activities T-110, T-120, T-121, V-15 and V-15A do not have a BACT and are subject to the plant-wide 5 tpy Regulation 7.25 limit.

$$\begin{aligned}
 & \text{VOC Emissions (tpy)} \\
 & = \left(0.001877 \text{ lb} \frac{\text{VOC}}{\text{lb product}} \right) \left(\text{lb} \frac{\text{product}}{\text{hr}} \right) (\text{Hours of Operation}) \\
 & \quad \left(1 \frac{\text{ton}}{2000 \text{ lb}} \right) (100\% - \text{Reduction Efficiency})
 \end{aligned}$$

- iii. The owner or operator shall daily record the water feed rate (gpm) to filter presses F-1 and F-1A to ensure the water flow rate is at least at 40 gpm when the filter presses F-1 and F-1A are filling. The owner or operator shall assume the following VOC emission factors for calculating VOC emissions unless other efficiencies are demonstrated through an analysis and approved in writing by the District.

Water Flow Rate	Estimated Emission Factor
< 40 gpm	0.00385 lb VOC/lb product
≥ 40 gpm	0.001877 lb VOC/lb product

- iv. The owner or operator shall maintain records of the material stored in each VOC storage vessel. If the contents of a storage vessel are changed, a record shall be made of the new contents, the new vapor pressure, and the date of the change in service.
- v. The owner or operator shall maintain a copy of the Safety Data Sheet (SDS) for each VOC-containing material used at this plant.

e. **TAC**

See Plant-Wide Specific Condition S2.d.

S3. **Reporting** (Regulation 2.17, section 5.2)

The owner or operator shall submit annual compliance reports in accordance with General Condition 12.

a. **PM/PM₁₀/PM_{2.5}**

- i. Identification of all periods when a process was operating and an associated control device was not operating during a reporting period, including the information recorded in S2.a.ii. If there were no bypass periods during a reporting period, the compliance report must include a statement to that effect.
- ii. Identification of all periods of operating outside the established pressure drop range for a control device, including the information recorded in S2.e.iv. If there were no excursions during the reporting period, the compliance report must include a statement to that effect.
- iii. See Plant-Wide Specific Conditions S3.a.

b. **Opacity**

See Plant-Wide Specific Conditions S3.b.

c. **NO_x**

There are no reporting requirements for this pollutant.

d. VOC

- i. For affected facilities subject to Regulation 7.25 without a BACT, the plant-wide calendar month and consecutive 12-month VOC emissions for each month in the reporting period.⁹
- ii. For EP TIX-1 (Spray Dryer V-16) and EP TIX-2 (Spray Dryer V-16A):
 - 1) The owner or operator shall report the plant-wide calendar month and consecutive 12-month VOC emissions for each month in the reporting period.
 - 2) The owner or operator shall report any instances the water feed rate (gpm) to the filter presses F-1 and F-1A was not at least 40 gpm when filter presses F-1 and F-1A were filling or a negative declaration.

e. TAC

See Plant-Wide Condition S3.d.

S4. Testing (Regulation 2.17, section 5.2)**VOC**

- a. Within 180 days of issuance of this permit, the owner or operator shall perform an analysis of the ethanol content and solids content of the spray dryer slurry to EP TIX-1 (Spray Dryer V-16) and EP TIX-2 (Spray Dryer V-16A). The test shall be performed at 90% or higher of maximum capacity, or allowable/permitted capacity, or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to perform the test, at maximum capacity, allowable/permitted capacity, or at a level of capacity which resulted in the greatest emissions, may necessitate a re-test or necessitate a revision of the allowable/permitted capacity of the process equipment depending upon the difference between the testing results and the limit.¹⁰
- b. The owner or operator shall furnish the District with a written report of the results of the analysis within 60 days following the actual date of completion of the analysis.

⁹ Emission Points EP TIX-3, EP TIX-4, EPTIX-5, EPTIX-11, EPTIX-12, EPAT-2, EPAT-3, & EPMGL-2; and Insignificant Activities T-110, T-120, T-121, V-15 and V-15A do not have a BACT and are subject to the plant-wide 5 tpy Regulation 7.25 limit.

¹⁰ BYK will assume that all ethanol present in the slurry will be emitted by the spray dryers. This analysis will establish an emission factor for calculating VOC emissions from the spray dryers.

Large Associative Thickener (AT) Plant

Dry Polymer System: Feed material is pumped from premix tanks into a reactor with a catalyst, then cooled, cut and packaged as a solid or dissolved in water or water/butyl carbitol mixture for packaging

Polymer Solution System (Optiflow): Product from the Dry Polymer System is dissolved in water or water/butyl carbitol mixture for packaging

Large AT Applicable Regulations

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
7.08	Standards of Performance for New Process Operations	1 through 3

Large AT Emission Points^{11, 12}

EP AT-	ID/Description	Applicable Regulations	Control Device	Stack ID
4	Shredder, 07/99	7.08	DC-309	S-431-AT-004

Large AT Control Devices

ID	Description	Stack ID
DC-309	C.P. Env. Fabric Filter	S-431-AT-004

Large AT Equipment Not Currently Regulated

EP AT-	ID/Description	Stack ID
5	T-316 Butyl Storage Tank, 6800 gallon	S-431-AT-005
6	PEG Storage Tanks (T-300 & T-301), 6800gallon	
8	Surfactant B & C Storage Tanks (T-302A & T-302B), 600 gal each	S-431-AT-008
9	T-303 Surfactant A Storage Tank, 6,800 gal	S-431-AT-009

¹¹ EP AT-7, the DD-302 Drum Dumper, has been disassembled and is no longer in use.

¹² The large reactor, large cooling roll, large knife mill and large product drumming handle large pieces of solid polymer and generate no PM emissions. There are no air emissions associated with the reactor, PEG Storage Tanks T-300 and T-301, surfactant storage tanks T-302A, T-302B and T-303, premix tanks T-304 and T-305 (1500 gallons each), T-310 and T-311 Mix Tanks (3200 gallons each), T-316 Storage Tank, the T-320, T-321, T-330 and T-331 Blend Tanks (6800 gallons, each) and the T-340, T-341, T-342, T-343, T-344 and T-345 Storage Tanks (14,000 gallons each).

Large AT Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **PM/PM₁₀/PM_{2.5}**

- i. For EP AT-4, the owner or operator shall not allow or cause the PM emissions to exceed 2.34 lb/hr from each piece of equipment based on actual operating hours in a calendar day. (Regulation 7.08)¹³
- ii. The owner or operator shall operate and maintain each control device at all times the associated process equipment is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice for minimizing emissions. (Regulation 2.17, section 5.1)
- iii. See Plant-Wide Specific Conditions S1.a.

b. **Opacity**

See Plant-Wide Specific Conditions S1.b.

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.

a. **PM/PM₁₀/PM_{2.5}**

- i. The owner or operator shall perform a monthly visual inspection of the structural and mechanical integrity of each control device for signs of damage, air leakage, corrosion, or other equipment defects and repair and/or replace defective components within 15 calendar days after an equipment defect is observed. A first attempt at repair shall be made no later than 5 calendar days after the defect is observed. The owner or operator shall maintain monthly records of the date and results of all inspections, identification of any repairs made including the date an equipment defect was observed and the date of first attempt to repair the defect, the date of successful repair, and a description of any maintenance performed or replacement of defective components.
- ii. For any period of time when the process was operating and a PM control device was not operating, the owner or operator shall maintain the following records:
 - 1) Date;
 - 2) The duration of the control device downtime including the start and stop time;
 - 3) Identification of the control device and process equipment;
 - 4) The process throughput during the control device downtime;
 - 5) The emissions of PM (lb/hr) and PM/PM₁₀/ PM_{2.5} (tons); and
 - 6) Summary information on the cause of the event, corrective action taken, and measures implemented to prevent recurrence.

¹³ This equipment cannot exceed the PM standard controlled.

- iii. The owner or operator shall monitor and record the pressure drop across DC-309 at least once per operating day to verify it is between 0.0 and 15.0 inches water column for each control device.
- iv. If there is any day when the process was not operating; the owner or operator shall record a negative declaration.
- v. For any period of operating outside the established pressure drop range for DC-309, the owner or operator shall monitor and maintain the following records:
 - 1) The date of the pressure excursion,
 - 2) The observed pressure drop, and
 - 3) Summary information on the cause of the event, corrective action taken, and measures implemented to prevent reoccurrence.
- vi. See Plant-Wide Specific Conditions S2.a.

b. **Opacity**

See Plant-Wide Specific Conditions S2.b.

S3. **Reporting** (Regulation 2.17, section 5.2)

The owner or operator shall submit annual compliance reports in accordance with General Condition 12.

a. **PM/PM₁₀/PM_{2.5}**

- i. Identification of all periods of bypassing a control device while an associated emission point(s) was in operation during a reporting period, including the information recorded in Specific Condition S2.a.ii. If there were no bypass periods during a reporting period, the compliance report must include a statement to that effect.
- ii. Identification of all periods of operating outside the established performance indicator range for a control device, including the information recorded in Specific Condition S2.a.iv. If there were no excursions during the reporting period, the compliance report must include a statement to that effect.
- iii. See Plant-Wide Specific Conditions S3.a.

b. **Opacity**

See Plant-Wide Specific Conditions S3.b.

Mastergel (MGL)

Mixing of Organoclay and solvent in a holding tank, milled and packaged in drums/pails

Mastergel Applicable Regulations

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
7.08	Standards of Performance for New Process Operations	1 through 3
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	1 through 5

Mastergel Emission Points¹⁴

EP MGL -	ID/Description¹⁵	Applicable Regulations	Control Device	Stack ID
1	Two (2) Mix Tanks, T-210 and T-211, 320 gal each, 08/89	7.08, 7.25	DC-JV	S-431-MGL-006

Mastergel Control Devices

ID	Description	Stack ID
DC-JV	Jet Vortex Dust Collector	S-431-MGL-006

¹⁴ The M-220 HP Micro Fluidizer was removed from service.

¹⁵ EPMGL-4 (Shearing Mill P-211) and EPMGL-5 (Gaulin Mill) are pumps.

Mastergel Specific Conditions**S1. Standards** (Regulation 2.17, section 5.1)**a. PM/PM₁₀/PM_{2.5}**

- i. From each piece of equipment (MGL-1, and MGL-2), the owner or operator shall not allow or cause the PM emissions to exceed 2.34 lb/hr based on actual operating hours in a calendar day. (Regulation 7.08)¹⁶
- ii. See Plant-Wide Specific Conditions S1.a.

b. Opacity

See Plant-Wide Specific Conditions S1.b.

c. VOC

For affected facilities subject to Regulation 7.25 without a BACT, the owner or operator shall not allow or cause the plant-wide VOC emissions to exceed 5 tons during any consecutive 12-month period, unless a BACT is submitted and approved by the District. (Regulation 7.25, section 3)¹⁷

S2. Monitoring and Record Keeping (Regulation 2.17, section 5.2)

The owner or operator shall maintain the required records for a minimum of 5 years and make the records readily available to the District upon request.

a. PM/PM₁₀/PM_{2.5}

See Plant-Wide Specific Conditions S2.a.

b. Opacity

See Plant-Wide Specific Conditions S2.b.

c. VOC

The owner or operator shall maintain monthly records, including calculations, of the calendar month and consecutive 12-month plant-wide VOC emissions for affected facilities subject to Regulation 7.25.

S3. Reporting (Regulation 2.17, section 5.2)

The owner or operator shall submit annual compliance reports in accordance with General Condition 12.

a. PM/PM₁₀/PM_{2.5}

See Plant-Wide Specific Conditions S3.a.

b. Opacity

See Plant-Wide Specific Conditions S3.b.

¹⁶ The uncontrolled emissions from these processes cannot exceed the PM standard in Regulation 7.08.

¹⁷ Emission Points EP TIX-3, EP TIX-4, EPTIX-5, EPTIX-11, EPTIX-12, EPAT-2, EPAT-3, & EPMGL-2; and Insignificant Activities T-110, T-120, T-121, V-15 and V-15A do not have a BACT and are subject to the plant-wide 5 tpy Regulation 7.25 limit.

c. **VOC**

For affected facilities subject to Regulation 7.25 without a BACT, the plant-wide calendar month and consecutive 12-month VOC emissions for each month in the reporting period.

Off-Permit Documents

There are no Off-Permit Documents associated with this operating permit.

Plant-wide HAP Speciation

HAP	CAS No.
Benzyl Chloride	100-44-7
Methyl Chloride	74-87-3
Diethylene Glycol Monobutyl Ether	112-34-5

Insignificant Activities

Description	Quantity	Basis
Small Associative Thickener Plant Tanks (T-110 Mix Tank, 1000 gal, T-120 & T-121 Blend Tanks, 1000 gal each, North & South Nauta Mixer Tanks, 735 gal each	5	Regulation 1.02, section 1.38.1.2.1
DC-31 – VacuMax 105201, central vacuum system	1	Regulation 1.02, section 1.38.1.2.1
Brazing, soldering, or welding equipment	6	Regulation 1.02 Appendix A, section 3.4
Storage tanks 250 gal or less: <ul style="list-style-type: none"> • Small AT Plant T-102 Sulfonic Acid Tank, 2 gal • Small AT Plant T-103 TEA Tank, 2 gal • Large AT Plant T-308 Sulfonic Acid, 12 gal • Large AT Plant T-309 TEA, 12 gal • Mastergel Activator tank 	5	Regulation 1.02 Appendix A, section 3.24
Combustion sources < 1.0 MMBtu/hr	7	Regulation 1.02 Appendix A, section 1.1

- 1) Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.
- 2) Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.
- 3) The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.
- 4) Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
- 5) The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.
- 6) The District has determined that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

Attachment A - Default Emission Factors, Calculation Methodologies, & Stack Tests

Generally, emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and accounting for any control devices unless otherwise approved in writing by the District.

TIX Emission Points			
EP TIX-	ID/Description	Control Device	Acceptable Emission Factor Sources
1	South Spray Dryer, V-16, 5 MMBtu/hr natural gas fired unit	DC-3	Natural Gas Combustion AP-42, Chapter 1, 2% Loss PM or AP-42 Chapter 13.2.4, Equation 1, Jan. 2008 Stack Test for VOC, or future approved stack tests.
2	North Spray Dryer, V-16A, 5 MMBtu/hr natural gas fired unit, 08/86	DC-3A	
3	Two (2) Premix Tanks (South System), V-9 & V-10, 5900 gal each	NA	EIIP Volume II, Chapter 16, - Methods for Estimating Air Emissions from Chemical Manufacturing Facilities & AP-42 Chapter 7.1
4	North System Premix Tank, V-9A, 5900 gal, 08/89	NA	
5	North System Premix Tank, V-10A, 5900 gal, 08/89	NA	
6	South Storage Hopper, Bag Adjust, Rework Addition	DC-4	AP-42 Chapter 13.2.4, Equation 1 or 1% Loss
7	North Storage Hopper, Bagging Machine, Bag Adjust, Rework Addition, 08/86	DC-4A	
8	Storage Bin and Clay Suspension Tank, V-4, 3000 lb/hr, 08/80	DC-2	AP-42 Chapter 13.2.4, Equation 1 or 2% Loss
9	Two (2) Clay Storage Silos, V1 & V2, w/ conveyor system, 27,000 lb/hr, 08/80	DC-1	
11	Four (4) Coagulator Tanks (South System) V-11, 12, 13, 14, 7000 gal ea., 08/89	NA	EIIP Volume II, Chapter 16, - Methods for Estimating Air Emissions from Chemical Manufacturing Facilities & AP-42 Chapter 7.1
12	Four (4) Coagulator Tanks (North System), V-11A, 12A, 13A, 14A, 7000 gal ea., 08/80	NA	
13	South Bag-Dump Station, Blender, Bagging Machine	DC-6	AP-42 Chapter 13.2.4, Equation 1 or 1% Loss
14	One (1) Quat Storage Tank, V-3S, 10,000 gal	NA	AP-42 Chapter 7.1
	One (1) Quat Storage Tank, V-3S, 10,000 gal		
	One (1) Quat Storage Tank, V-3NA, 10,000 gal		
19	South Filter Receiver for product convey system, DC-7, 1000 lb/hr, 01/09	NA	AP-42 Chapter 13.2.4, Equation 1 or 1% Loss
20	North Filter Receiver for product convey system, DC-7A, 1000 lb/hr, 01/09	NA	
21a	South Compartment of Transition Hopper for product convey system, 1000 lb/hr, 01/09	DC-7	
21b	North Compartment of Transition Hopper for product convey system, 1000 lb/hr, 01/09	DC-7A	
22	South Bagging Machine (air packer) for product convey system, 1000 lb/hr, 01/09	DC-7	
23	North Bagging Machine (air packer) for product convey system, 1000 lb/hr, 01/09	DC-7A	
24	Hopper H-60	DC-210	
25	Hopper H-61		

TIX Control Devices			
ID	Description	Efficiency	Basis
DC-3	Mikropul 238S-10-20TR	95%	Not yet tested; no certified guarantee
DC-3A	Mikropul 238S-10-20TR	95%	
DC-4	Mikropul 81S-8-20	95%	Not yet tested; no certified guarantee
DC-4A	Mikropul 16S-8-30	95%	
DC-2	Flex-Kleen 36-CTBS-24 I	95%	
DC-1	Flex-Kleen 12-52-16163	95%	
DC-6	Flex-Kleen 84-BVBS-25 TTT	95%	
DC-7	Griffin Filter Receiver CV-7-PV20	95%	
DC-7A	Griffin Filter Receiver CV-7-PV20	95%	
DC-210	Flex Kleen Fabric Filter	95%	

Large AT Emission Points			
EP AT-	ID/Description	Control Device	Acceptable Emission Factor Sources
2	T-304 and T-305 Premix Tanks, 1500 gal each, including large and small reactors and all premix tanks, 07/98. ^{18, 19}	NA	EIIP Volume II, Chapter 16, - Methods for Estimating Air Emissions from Chemical Manufacturing Facilities & Tanks 4.0
3			
4	Shredder, 07/99	DC-309	Site Specific Emission Factor 0.001 lb PM/lb product
5	T-316 Butyl Carbitol Storage Tank, 6800 gal, 07/98	NA	AP-42 Chapter 7.1
6	PEG Storage Tanks (T-300 & T-301), 6800 gal ea., 07/98	NA	
8	Surfactant B & C Storage Tanks (T-302A & T-302B), 600 gal ea., 07/98	NA	
9	T-303 Surfactant A Storage Tank, 6800 gal, 07/98	NA	

Large AT Control Devices			
ID	Description	Efficiency	Basis
DC-309	C.P. Env. Fabric Filter	95%	Not yet tested; no certified guarantee

18 EP AT-7, the DD-302 Drum Dumper, has been disassembled and removed from the plant site.

19 The large reactor, large cooling roll, large knife mill and large product drumming handle large pieces of solid polymer and generate no PM emissions. There are no air emissions associated with T-310 and T-311 Mix Tanks (3200 gallons each), the T-320, T-321, T-330 and T-331 Blend Tanks (6800 gallons, each) and the T-340, T-341, T-342, T-343, T-344 and T-345 Storage Tanks (14,000 gallons each).

Mastergel Emission Points			
EP MGL -	ID/Description	Control Device	Acceptable Emission Factor Sources
1	Two (2) Mix Tanks, T-210 and T-211, 320 gal each, 08/89	NA	EIIP Volume II, Chapter 16, - Methods for Estimating Air Emissions from Chemical Manufacturing Facilities
2			
3	Product Drumming Station	NA	AP-42 Emission Factors from Chapter 5.2, Section 5.2.2.1.1, Loading Losses
4	Shearing Mill, P-211	NA	1% Loss for PM
5	Gaulin Mill, 08/96	NA	1% Loss for PM

Mastergel Control Devices			
ID	Description	Efficiency	Basis
DC-JV	Jet Vortex Dust Collector	95%	Not yet tested; no certified guarantee

Attachment B - Protocol Checklist for a Performance Test

A completed protocol should include the following information:

- Facility name, location, and ID #;
- Responsible Official and environmental contact names;
- Permit numbers that are requiring the test to be conducted;
- Test methods to be used (i.e. EPA Method 1, 2, 3, 4, and 5);
- Alternative test methods or description of modifications to the test methods to be used;
- Purpose of the test including equipment and pollutant to be tested; the purpose may be described in the permit that requires the test to be conducted or may be to show compliance with a federal regulation or emission standard;
- Tentative test dates (These may change but the District will need final notice at least 10 days in advance of the actual test dates in order to arrange for observation.);
- Maximum rated production capacity of the system;
- Production-rate goal planned during the performance test for demonstration of compliance (if appropriate, based on limits);
- Method to be used for determining rate of production during the performance test;
- Method to be used for determining rate of production during subsequent operations of the process equipment to demonstrate compliance;
- Description of normal operation cycles;
- Discussion of operating conditions that tend to cause worse case emissions; it is especially important to clarify this if worst case emissions do not come from the maximum production rate;
- Process flow diagram;
- The type and manufacturer of the control equipment, if any;
- The control equipment (baghouse, scrubber, condenser, etc.) parameter to be monitored and recorded during the performance test. Note that this data will be used to ensure representative operation during subsequent operations. These parameters can include pressure drops, flow rates, pH, and temperature. The values achieved during the test may be required during subsequent operations to describe what pressure drops, etcetera, are indicative of good operating performance;
- How quality assurance and accuracy of the data will be maintained, including:
 - Sample identification and chain-of-custody procedures
 - If audit samples are required for this test method, audit sample provider and number of audit samples to be used
- Pipe, duct, stack, or flue diameter to be tested;
- Distances from the testing sample ports to the nearest upstream and downstream flow disturbances for outlet and inlet (if required);
- Determine number of traverse points to be tested for outlet and additionally for inlet (if required) using Appendix A-1 to 40 CFR Part 60;
 - Method 1 if stack diameter is >12", Method 1a if stack diameter is greater than or equal to 4" and less than 12", Alternate method of determination for <4"
 - If a sample location at least two stack or duct diameters downstream and half a diameter upstream from any flow disturbance is not available then an alternative procedure is available for determining the acceptability of a measurement location. This procedure described in Method 1, Section 11.5 allows for the determination of gas flow angles at the sampling points and comparison of the measured results with acceptability criteria.

The Stack Test Review fee shall be submitted with each stack test protocol.